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vol 2

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NEW
TABLES
Of the Motions of the
PLANETS,
THE
FIXED STARS,
AND THE
Firſt Satellite of *Jupiter*;
OF
RIGHT and OBLIQUE ASCENCIONS,
AND
Logiſtical Logarithms.

VOL. II.

By CHARLES LEADBETTER, Teacher of the Mathematicks.

LONDON,
Printed for J. WILCOX, at the *Green Dragon* in
in *Little Britain.* MDCCXXVIII.

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THE
PREFACE.

THE *Want of good* Aſtronomical Tables *at this time being ſo very great, I thought I could not do a better piece of Service to my Countrymen, than to preſent them with a Compleat Body of* New Ones, *of the Motions of all the Planets ; of the Præceſſion of the* Æquinox ; *of near* 800 *Fixed Stars viſible in our Hemiſphere : Together with Eaſie and Exact Tables of the Firſt Satellite of* Jupiter *(which will be of great uſe to find the Difference of Meridians of any City or Town from* London :) *You have alſo the Right and Oblique Aſcenſions in time to ſix Degrees of North and South Latitude, and all other Tables neceſſary to Compleat ſo uſeful a Work : There are likewiſe annex'd, two Sorts of Logiſtical Logarithms. And as I have grounded the Work upon the* Pythagorean *Hypotheſis ; ſo I have placed thoſe of the Planets in the ſame Order as the Planets lye in that Syſtem, Beginning with the* Sun, *the Center of the Univerſe, and ſo Aſcending up to* Saturn.

NEW

NEW

Aſtronomical TABLES

Of all the

PLANETS, &c.

A

Add to the *Equal*, or Sub. from *Apparent* Time.

Degrees.	♈ ♎		♉ ♏		♊ ♐		*Degrees.*
	Min.	*Sec.*	*Min.*	*Sec.*	*Min.*	*Sec.*	
0	0	0	8	24	8	45	30
1	0	20	8	34	8	35	29
2	0	40	8	44	8	24	28
3	1	0	8	54	8	13	27
4	1	19	9	2	8	1	26
5	1	39	9	10	7	48	25
6	1	59	9	17	7	34	24
7	2	18	9	24	7	20	23
8	2	37	9	30	7	6	22
9	2	57	9	35	6	50	21
10	3	16	9	40	6	35	20
11	3	34	9	44	6	18	19
12	3	52	9	48	6	2	18
13	4	10	9	50	5	44	17
14	4	28	9	52	5	27	16
15	4	46	9	53	5	8	15
16	5	4	9	54	4	50	14
17	5	20	9	54	4	31	13
18	5	37	9	53	4	11	12
19	5	53	9	51	3	52	11
20	6	9	9	49	3	32	10
21	6	25	9	46	3	11	9
22	6	40	9	42	2	51	8
23	6	54	9	38	2	30	7
24	7	9	9	31	2	9	6
25	7	23	9	25	1	48	5
26	7	36	9	19	1	26	4
27	7	48	9	12	1	5	3
28	8	1	9	4	0	43	2
29	8	13	8	55	0	21	1
30	8	24	8	45	0	0	0
Degr.	♓ ♍		♒ ♌		♑ ♋		*Degr.*

Sub. from the *Equal*, or Add to *Apparent* Time.

Add to the *Equal*, or Sub. from *Apparent* Time.

Degrees.	0		1		2		3		4		5		°
	'	"	'	"	'	"	'	"	'	"	'	"	
0	0	0	3	48	6	39	7	45	6	47	3	57	30
1	0	8	3	55	6	43	7	45	6	43	3	50	29
2	0	16	4	2	6	47	7	45	6	39	3	42	28
3	0	24	4	9	6	50	7	45	6	35	3	35	27
4	0	32	4	15	6	54	7	45	6	30	3	28	26
5	0	40	4	22	6	58	7	44	6	26	3	20	25
6	0	48	4	29	7	1	7	44	6	21	3	13	24
7	0	55	4	35	7	5	7	43	6	16	3	5	23
8	1	3	4	42	7	8	7	42	6	11	2	57	22
9	1	11	4	48	7	11	7	41	6	6	2	50	21
10	1	19	4	54	7	14	7	40	6	1	2	42	20
11	1	27	5	0	7	17	7	38	5	56	2	34	19
12	1	35	5	6	7	19	7	37	5	51	2	26	18
13	1	42	5	12	7	22	7	35	5	45	2	18	17
14	1	50	5	18	7	24	7	34	5	40	2	11	16
15	1	58	5	24	7	27	7	32	5	34	2	3	15
16	2	6	5	30	7	29	7	30	5	28	1	55	14
17	2	13	5	35	7	31	7	28	5	22	1	47	13
18	2	21	5	41	7	33	7	25	5	16	1	39	12
19	2	28	5	46	7	35	7	23	5	10	1	30	11
20	2	36	5	52	7	36	7	20	5	4	1	22	10
21	2	41	5	57	7	38	7	17	4	58	1	14	9
22	2	51	6	2	7	39	7	15	4	50	1	6	8
23	2	58	6	7	7	40	7	12	4	45	0	58	7
24	3	6	6	12	7	41	7	9	4	38	0	49	6
25	3	13	6	16	7	42	7	6	4	31	0	41	5
26	3	20	6	21	7	43	7	2	4	25	0	33	4
27	3	27	6	26	7	44	6	59	4	18	0	25	3
28	3	34	6	30	7	44	6	55	4	11	0	16	2
29	3	41	6	34	7	45	6	51	4	4	0	8	1
30	3	48	6	39	7	45	6	47	3	57	0	0	0

Sub. from the *Equal*, or Add to *Apparent* Time.

11 10 9 8 7 6 Signs

Years of Christ	*Præceſſion of the* Æquinox.				*Years*	*Præceſſion of the* Æquinox.			
Current.	S.	°	′	″	*Compl.*	S.	°	′	″
1	0	5	23	30	1	0	0	0	50
101	0	6	46	50	2	0	0	1	40
201	0	8	10	10	3	0	0	2	30
301	0	9	33	30	4	0	0	3	20
401	0	10	56	50	5	0	0	4	10
501	0	12	20	10	6	0	0	5	0
601	0	13	43	30	7	0	0	5	50
701	0	15	6	50	8	0	0	6	40
801	0	16	30	10	9	0	0	7	30
901	0	17	53	30	10	0	0	8	20
1001	0	19	16	50	11	0	0	9	10
1101	0	20	40	10	12	0	0	10	0
1201	0	22	3	30	13	0	0	10	50
1301	0	23	26	50	14	0	0	11	40
1401	0	24	50	10	15	0	0	12	30
1501	0	26	13	30	16	0	0	13	20
1601	0	27	36	50	17	0	0	14	10
1701	0	29	0	10	18	0	0	15	0
1801	1	0	23	30	19	0	0	15	50
1901	1	1	46	50	20	0	0	16	40
2001	1	3	10	10	40	0	0	33	20
					60	0	0	50	0
					80	0	1	6	40
					100	0	1	23	20
					200	0	2	46	40
					300	0	4	10	0
					400	0	5	33	20
					500	0	6	56	40
					600	0	8	20	0
					700	0	9	43	20
					800	0	11	6	40
					900	0	12	30	0
					1000	0	13	53	20
					2000	0	27	46	40
					3000	1	11	40	0
					4000	1	25	33	20

		S.	°	′	″
1601	*Tycho's* firſt * ♈	0	27	36	50
1700	*Flamſteed* firſt * ♈	0	28	59	20
99	Difference		1	22	30
1	add				50
100	Motion		1	23	20
By which *Ann. Preceſſ.* is exactly					50

Years	*Præceſſion of the* Æquinox.			
Compleat.	S.	°	′	″
5000	2	9	26	40
6000	2	23	20	0
7000	3	7	13	20
8000	3	21	6	40
9000	4	5	0	0
10000	4	28	53	20
11000	5	2	46	40
12000	5	16	40	0
13000	6	0	33	20
14000	6	14	26	40
15000	6	28	20	0
16000	7	12	13	20
17000	7	26	6	40
18000	8	10	0	0
19000	8	23	53	20
20000	9	7	46	40
21000	9	21	40	0
22000	10	5	33	20
23000	10	19	26	40
24000	11	3	20	0
25000	11	17	13	20
25920	12	0	0	0

Months.	P. *of the* Æquinox.			
January.	0	0	0	0
Febr.	0	0	0	4
March.	0	0	0	8
April.	0	0	0	12
May.	0	0	0	17
June.	0	0	0	21
July.	0	0	0	25
Auguſt.	0	0	0	29
Sept.	0	0	0	34
Octob.	0	0	0	38
Nov.	0	0	0	42
Dec.	0	0	0	46

Days.	*Præceſſion of the* Æquinox.			
	S.	°	′	″
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
7	0	0	0	1
8	0	0	0	1
9	0	0	0	1
10	0	0	0	1
11	0	0	0	1
12	0	0	0	1
13	0	0	0	2
14	0	0	0	2
15	0	0	0	2
16	0	0	0	2
17	0	0	0	2
18	0	0	0	2
19	0	0	0	2
20	0	0	0	2
21	0	0	0	3
22	0	0	0	3
23	0	0	0	3
24	0	0	0	3
25	0	0	0	3
26	0	0	0	3
27	0	0	0	3
28	0	0	0	3
29	0	0	0	4
30	0	0	0	4
31	0	0	0	4

Years of Chriſt Current.	*Præceſſion of the Æquinox.*				*Years of Chriſt Current.*	*Præceſſion of the Æquinox.*			
	S.	°	′	″		S.	°	′	″
1678	0	28	41	0	1714	0	29	11	0
1679	0	28	41	50	1715	0	29	11	50
1680	0	28	42	40	1716	0	29	12	40
1681	0	28	43	30	1717	0	29	13	30
1682	0	28	44	20	1718	0	29	14	20
1683	0	28	45	10	1719	0	29	15	10
1684	0	28	46	0	1720	0	29	16	0
1685	0	28	46	50	1721	0	29	16	50
1686	0	28	47	40	1722	0	29	17	40
1687	0	28	48	30	1723	0	29	18	30
1688	0	28	49	20	1724	0	29	19	20
1689	0	28	50	10	1725	0	29	20	10
1690	0	28	51	0	1726	0	29	21	0
1691	0	28	51	50	1727	0	29	21	50
1692	0	28	52	40	1728	0	29	22	40
1693	0	28	53	30	1729	0	29	23	30
1694	0	28	54	20	1730	0	29	24	20
1695	0	28	55	10	1731	0	29	25	10
1696	0	28	56	0	1732	0	29	26	0
1697	0	28	56	50	1733	0	29	26	50
1698	0	28	57	40	1734	0	29	27	40
1699	0	28	58	30	1735	0	29	28	30
1700	0	28	59	20	1736	0	29	29	20
1701	0	29	0	10	1737	0	29	30	10
1702	0	29	1	0	1738	0	29	31	0
1703	0	29	1	50	1739	0	29	31	50
1704	0	29	2	40	1740	0	29	32	40
1705	0	29	3	30	1741	0	29	33	30
1706	0	29	4	20	1742	0	29	34	20
1707	0	29	5	10	1743	0	29	35	10
1708	0	29	6	0	1744	0	29	36	0
1709	0	29	6	50	1745	0	29	36	50
1710	0	29	7	40	1746	0	29	37	40
1711	0	29	8	30	1747	0	29	38	30
1712	0	29	9	20	1748	0	29	39	20
1713	0	29	10	10	1749	0	29	40	10

Years of Chriſt Current.	Præceſſion of the Æquinox.				Years of Chriſt Current.	Præceſſion of the Æquinox.			
	S.	°	′	″		S.	°	′	″
1750	0	29	41	0	1786	1	0	11	0
1751	0	29	41	50	1787	1	0	11	50
1752	0	29	42	40	1788	1	0	12	40
1753	0	29	43	30	1789	1	0	13	30
1754	0	29	44	20	1790	1	0	14	20
1755	0	29	45	10	1791	1	0	15	10
1756	0	29	46	0	1792	1	0	16	0
1757	0	29	46	50	1793	1	0	16	50
1758	0	29	47	40	1794	1	0	17	40
1759	0	29	48	30	1795	1	0	18	30
1760	0	29	49	20	1796	1	0	19	20
1761	0	29	50	10	1797	1	0	20	10
1762	0	29	51	0	1798	1	0	21	0
1763	0	29	51	50	1799	1	0	21	50
1764	0	29	52	40	1800	1	0	22	40
1765	0	29	53	30	1801	1	0	23	30
1766	0	29	54	20	1802	1	0	24	20
1767	0	29	55	10	1803	1	0	25	10
1768	0	29	56	0	1804	1	0	26	0
1769	0	29	56	50	1805	1	0	26	50
1770	0	29	57	40	1806	1	0	27	40
1771	0	29	58	30	1807	1	0	28	30
1772	0	29	59	20	1808	1	0	29	20
1773	1	0	0	10	1809	1	0	30	10
1774	1	0	1	0	1810	1	0	31	0
1775	1	0	1	50	1811	1	0	31	50
1776	1	0	2	40	1812	1	0	32	40
1777	1	0	3	30	1813	1	0	33	30
1778	1	0	4	20	1814	1	0	34	20
1779	1	0	5	10	1815	1	0	35	10
1780	1	0	6	0	1816	1	0	36	0
1781	1	0	6	50	1817	1	0	36	50
1782	1	0	7	40	1818	1	0	37	40
1783	1	0	8	30	1819	1	0	38	30
1784	1	0	9	20	1820	1	0	39	20
1785	1	0	10	10	1821	1	0	40	10

Years	Sun's Longitude.				Sun's Anomaly.			
Compleat.	S.	°	'	"	S.	°	'	"
1	11	29	45	40	11	29	44	37
2	11	29	31	20	11	29	29	14
3	11	29	17	0	11	29	13	51
B 4	0	0	1	49	11	29	57	37
5	11	29	47	29	11	29	42	14
6	11	29	33	9	11	29	26	51
7	11	29	18	49	11	29	11	28
B 8	0	0	3	37	11	29	55	13
9	11	29	49	18	11	29	39	51
10	11	29	34	58	11	29	24	28
11	11	29	20	38	11	29	9	5
B 12	0	0	5	26	11	29	52	50
13	11	29	51	6	11	29	37	27
14	11	29	36	47	11	29	22	5
15	11	29	22	27	11	29	6	42
B 16	0	0	7	15	11	29	50	27
17	11	29	52	55	11	29	35	4
18	11	29	38	35	11	29	19	41
19	11	29	24	15	11	29	4	18
B 20	0	0	9	4	11	29	48	4
40	0	0	18	8	11	29	36	8
60	0	0	27	12	11	29	24	12
80	0	0	36	16	11	29	12	16
100	0	0	45	20	11	29	0	20
200	0	1	30	40	11	28	0	40
300	0	2	16	0	11	27	1	0
400	0	3	1	20	11	26	1	20
500	0	3	46	40	11	25	1	40
600	0	4	32	0	11	24	2	0
700	0	5	17	20	11	23	2	20
800	0	6	2	40	11	22	2	40
900	0	6	48	0	11	21	3	0
1000	0	7	33	20	11	20	3	20

Years of Christ Current.	Sun's Longitude.				Sun's Anomaly.			
	S.	°	'	"	S.	°	'	"
1	9	7	53	10	6	29	53	40
101	9	8	38	30	6	28	54	0
201	9	9	23	50	6	27	54	20
301	9	10	9	10	6	26	54	40
401	9	10	54	30	6	25	55	0
501	9	11	39	50	6	24	55	20
601	9	12	25	10	6	23	55	40
701	9	13	10	30	6	22	56	0
801	9	13	55	50	6	21	56	20
901	9	14	41	10	6	20	56	40
1001	9	15	26	30	6	19	57	0
1101	9	16	11	50	6	18	57	20
1201	9	16	57	10	6	17	57	40
1301	9	17	42	30	6	16	58	0
1401	9	18	27	50	6	15	58	20
1501	9	19	13	10	6	14	58	40
1601	9	19	58	30	6	13	59	0
1701	9	20	43	50	6	12	59	20
1801	9	21	29	10	6	11	59	40
1901	9	22	14	30	6	11	0	0
2001	9	22	59	50	6	10	0	20
1681	9	20	34	46	6	13	11	16
1682	9	20	20	26	6	12	55	53
1683	9	20	6	6	6	12	40	30
1684	9	19	51	46	6	12	25	7
1685	9	20	36	34	6	13	8	52
1686	9	20	22	14	6	12	53	29
1687	9	20	8	54	6	12	38	6
1688	9	19	54	34	6	12	22	43
1689	9	20	38	22	6	13	6	28
1690	9	20	24	2	6	12	52	5
1691	9	20	9	42	6	12	36	45
1692	9	19	55	22	6	12	20	19

Years of Christ Current.	Sun's Longitude.				Sun's Anomaly.			
	S.	°	'	"	S.	°	'	"
1693	9	20	40	11	6	13	4	5
1694	9	20	25	51	6	12	48	42
1695	9	20	11	31	6	12	33	19
1696	9	19	57	11	6	12	17	56
1697	9	20	41	59	6	13	1	41
1698	9	20	27	39	6	12	46	18
1699	9	20	13	19	6	12	30	55
1700	9	19	58	59	6	12	15	32
1701	9	20	43	50	6	12	59	20
1702	9	20	29	27	6	12	43	54
1703	9	20	15	7	6	12	28	31
1704	9	20	0	47	6	12	13	8
1705	9	20	45	35	6	12	56	53
1706	9	20	31	15	6	12	41	30
1707	9	20	16	55	6	12	26	7
1708	9	20	2	35	6	12	10	44
1709	9	20	47	23	6	12	54	29
1710	9	20	33	3	6	12	39	6
1711	9	20	18	43	6	12	23	43
1712	9	20	4	23	6	12	8	20
1713	9	20	49	11	6	12	52	5
1714	9	20	34	51	6	12	36	42
1715	9	20	20	31	6	12	21	19
1716	9	20	6	11	6	12	5	56
1717	9	20	51	0	6	12	49	41
1718	9	20	36	40	6	12	34	18
1719	9	20	22	20	6	12	18	55
1720	9	20	8	0	6	12	3	32
1721	9	20	52	54	6	12	47	24
1722	9	20	38	34	6	12	32	1
1723	9	20	24	14	6	12	16	38
1724	9	20	9	54	6	12	1	15
1725	9	20	54	43	6	12	45	1

Years of Christ Current.	Sun's Longitude.				Sun's Anomaly.			
	S.	°	′	″	S.	°	′	″
1726	9	20	40	23	6	12	29	38
1727	9	20	26	3	6	12	14	15
1728	9	20	11	43	6	11	58	52
1729	9	20	56	32	6	12	42	37
1730	9	20	42	12	6	12	27	14
1731	9	20	27	52	6	12	11	51
1732	9	20	13	32	6	11	56	28
1733	9	20	58	21	6	12	40	13
1734	9	20	44	1	6	12	24	50
1735	9	20	29	41	6	12	9	27
1736	9	20	15	21	6	11	54	12
1737	9	21	0	10	6	12	37	57
1738	9	20	45	50	6	12	22	34
1739	9	20	31	30	6	12	7	11
1740	9	20	17	10	6	11	51	48
1741	9	21	1	58	6	12	35	28
1742	9	20	47	38	6	12	20	5
1743	9	20	33	18	6	12	4	42
1744	9	20	18	58	6	11	49	19
1745	9	21	3	48	6	12	33	4
1746	9	20	49	27	6	12	17	41
1747	9	20	35	7	6	12	2	18
1748	9	20	20	47	6	11	46	55
1749	9	21	5	36	6	12	30	40
1750	9	20	51	16	6	12	15	17
1751	9	20	36	56	6	11	59	54
1752	9	20	22	36	6	11	44	31
1753	9	21	7	25	6	12	28	16
1754	9	20	53	5	6	12	12	53
1755	9	20	38	45	6	11	57	30
1756	9	20	24	25	6	11	42	7
1757	9	21	9	14	6	12	25	52
1758	9	20	54	54	6	12	10	29

Years of Christ. Current	Sun's Longitude.				Sun's Anomaly.			
	S.	°	′	″	S.	°	′	″
1759	9	20	40	34	6	11	55	6
1760	9	20	26	14	6	11	39	43
1761	9	21	11	2	6	12	23	32
1762	9	20	56	44	6	12	8	9
1763	9	20	42	24	6	11	52	46
1764	9	20	28	4	6	11	37	23
1765	9	21	12	52	6	12	21	8
1766	9	20	58	32	6	12	5	45
1767	9	20	44	12	6	11	50	22
1768	9	20	29	52	6	11	34	59
1769	9	21	14	42	6	12	18	44
1770	9	21	0	22	6	12	3	21
1771	9	20	46	2	6	11	47	58
1772	9	20	31	42	6	11	32	35
1773	9	21	16	31	6	12	16	20
1774	9	21	2	11	6	12	0	57
1775	9	20	47	51	6	11	45	34
1776	9	20	33	31	6	11	30	11
1777	9	21	18	20	6	12	13	56
1778	9	21	4	0	6	11	58	33
1779	9	20	49	40	6	11	43	10
1780	9	20	35	20	6	11	27	47
1781	9	21	20	6	6	12	17	34
1782	9	21	5	44	6	11	56	11
1783	9	20	51	24	6	11	40	48
1784	9	20	37	4	6	11	25	25
1785	9	21	21	52	6	12	9	10
1786	9	21	7	32	6	11	53	47
1787	9	20	53	12	6	11	38	24
1788	9	20	38	52	6	11	23	1
1789	9	21	23	40	6	12	6	46
1790	9	21	9	20	6	11	51	23
1791	9	20	55	0	6	11	36	0

Years of Christ Current.	Sun's Longitude				Sun's Anomaly.			
	S.	°	′	″	S.	°	′	″
1792	9	20	40	40	6	11	20	17
1793	9	21	25	28	6	12	4	22
1794	9	21	11	8	6	11	48	59
1795	9	20	56	48	6	11	33	36
1796	9	20	42	28	6	11	18	13
1797	9	21	27	17	6	12	1	58
1798	9	21	12	57	6	11	46	35
1799	9	20	58	37	6	11	31	12
1800	9	20	44	17	6	11	15	49
1801	9	21	29	10	6	10	59	40
1802	9	21	14	50	6	11	44	17
1803	9	21	0	30	6	11	28	54
1804	9	20	46	10	6	11	13	31
1805	9	21	30	59	6	11	57	16
1806	9	21	16	39	6	11	41	53
1807	9	21	2	19	6	11	26	40
1808	9	20	47	59	6	11	11	17
1809	9	21	32	17	6	11	55	2
1810	9	21	18	27	6	11	39	39
1011	9	21	4	7	6	11	24	16
1812	9	20	49	47	6	11	8	53
1813	9	21	34	36	6	11	52	38
1814	9	21	20	16	6	11	37	15
1815	9	21	5	56	6	11	21	52
1816	9	20	51	36	6	11	6	29
1817	9	21	36	24	6	11	50	14
1818	9	21	22	4	6	11	34	51
1819	9	21	7	44	6	11	19	28
1820	9	20	53	24	6	11	4	5
1821	9	21	38	14	6	11	47	44
1822	9	21	23	54	6	11	32	21
1823	9	21	9	35	6	11	16	58
1824	9	20	55	16	6	11	1	35

Common Year.	*Præceſſ. Æqui.*	JANUARY. Sun's Longitude.				JANUARY. Sun's Anomaly.			
		S.	°	′	″	S	°	′	″
1	0	0	0	59	8	0	0	59	8
2	0	0	1	58	17	0	1	58	17
3	0	0	2	57	25	0	2	57	25
4	0	0	3	56	33	0	3	56	33
5	0	0	4	55	42	0	4	55	42
6	0	0	5	54	50	0	5	54	50
7	1	0	6	53	58	0	6	53	57
8	1	0	7	53	7	0	7	53	6
9	1	0	8	52	15	0	8	52	14
10	1	0	9	51	23	0	9	51	22
11	1	0	10	50	31	0	10	50	30
12	1	0	11	49	40	0	11	49	39
13	1	0	12	48	48	0	12	48	47
14	2	0	13	47	57	0	13	47	55
15	2	0	14	47	5	0	14	47	3
16	2	0	15	46	13	0	15	46	10
17	2	0	16	45	22	0	16	45	9
18	2	0	17	44	30	0	17	44	27
19	2	0	18	43	38	0	18	43	35
20	2	0	19	42	47	0	19	42	44
21	3	0	20	41	55	0	20	41	52
22	3	0	21	41	3	0	21	41	0
23	3	0	22	40	12	0	22	40	8
24	3	0	23	39	20	0	23	39	16
25	3	0	24	38	28	0	24	38	24
26	3	0	25	37	37	0	25	37	33
27	3	0	26	36	45	0	26	36	41
28	4	0	27	35	53	0	27	35	48
29	4	0	28	35	2	0	28	34	56
30	4	0	29	34	10	0	29	34	5
31	4	1	0	33	18	1	0	33	14

FEBRUARY.

Common Year.	Sun's Longitude.				Sun's Anomaly.				Præceſſ. Æquin.	Biſſextile.
	S.	°	′	″	S.	°	′	″		
1	1	1	32	26	1	1	32	21	4	0
2	1	2	31	35	1	2	31	30	4	1
3	1	3	30	43	1	3	30	38	4	2
4	1	4	29	51	1	4	29	46	5	3
5	1	5	29	0	1	5	28	55	5	4
6	1	6	28	8	1	6	28	3	5	5
7	1	7	27	16	1	7	27	11	5	6
8	1	8	26	25	1	8	26	20	5	7
9	1	9	25	33	1	9	25	27	5	8
10	1	10	24	41	1	10	24	35	5	9
11	1	11	23	49	1	11	23	43	6	10
12	1	12	22	58	1	12	22	52	6	11
13	1	13	22	6	1	13	22	0	6	12
14	1	14	21	15	1	14	21	9	6	13
15	1	15	20	23	1	15	20	17	6	14
16	1	16	19	31	1	16	19	24	6	15
17	1	17	18	40	1	17	18	32	6	16
18	1	18	17	48	1	18	17	40	7	17
19	1	19	16	56	1	19	16	48	7	18
20	1	20	16	5	1	20	15	57	7	19
21	1	21	15	13	1	21	15	5	7	20
22	1	22	14	21	1	22	14	12	7	21
23	1	23	13	30	1	23	13	21	7	22
24	1	24	12	38	1	24	12	29	7	23
25	1	25	11	46	1	25	11	37	7	24
26	1	26	10	55	1	26	10	46	8	25
27	1	27	10	3	1	27	9	54	8	26
28	1	28	9	11	1	28	9	1	8	27
29	1	29	8	20	1	29	8	10	8	28
										29

MARCH.

Common Year.	Præceſſ. Æqui.	Sun's Longitude.				Sun's Anomaly.				Biſſextile.
||	||	S.	°	'	''	S.	'	'	''	||
1	8	1	29	8	20	1	29	8	10	0
2	8	2	0	7	28	2	0	7	18	1
3	8	2	1	6	36	2	1	6	26	2
4	9	2	2	5	44	2	2	5	33	3
5	9	2	3	4	53	2	3	4	42	4
6	9	2	4	4	1	2	4	3	50	5
7	9	2	5	3	9	2	5	2	58	6
8	9	2	6	2	18	2	6	2	7	7
9	9	2	7	1	26	2	7	1	15	8
10	9	2	8	0	34	2	8	0	22	9
11	10	2	8	59	42	2	8	59	30	10
12	10	2	9	58	51	2	9	58	39	11
13	10	2	10	57	59	2	10	57	47	12
14	10	2	11	57	8	2	11	56	56	13
15	10	2	12	56	16	2	12	56	4	14
16	10	2	13	55	24	2	13	55	11	15
17	10	2	14	54	33	2	14	54	20	16
18	11	2	15	53	41	2	15	53	28	17
19	11	2	16	52	49	2	16	52	36	18
20	11	2	17	51	58	2	17	51	45	20
21	11	2	18	51	6	2	18	50	53	21
22	11	2	19	50	14	2	19	50	0	22
23	11	2	20	49	23	2	20	49	9	23
24	11	2	21	48	31	2	21	48	17	24
25	12	2	22	47	39	2	22	47	25	25
26	12	2	23	46	48	2	23	46	34	26
27	12	2	24	45	56	2	24	45	42	27
28	12	2	25	45	4	2	25	44	49	28
29	12	2	26	44	13	2	26	43	58	29
30	12	2	27	43	21	2	27	43	6	30
31	12	2	28	42	29	2	28	42	15	31

Common Year.	APRIL.								*Præceſſ. Æqui.*	*Biſſextile.*
	Sun's Longitude.				Sun's Anomaly.					
	S.	°	′	″	S.	°	′	″		
1	2	29	41	38	2	29	41	23	13	0
2	3	0	40	46	3	0	40	32	13	1
3	3	1	39	55	3	1	39	40	13	2
4	3	2	39	3	3	2	38	48	13	3
5	3	3	38	12	3	3	37	56	13	4
6	3	4	37	20	3	4	37	4	13	5
7	3	5	36	28	3	5	36	12	13	6
8	3	6	35	37	3	6	35	20	14	7
9	3	7	34	45	3	7	34	28	14	18
10	3	8	33	53	3	8	33	36	14	19
11	3	9	33	1	3	9	32	44	14	10
12	3	10	32	10	3	10	31	53	14	11
13	3	11	31	18	3	11	31	1	14	12
14	3	12	30	27	3	12	30	10	14	13
15	3	13	29	35	3	13	29	18	15	14
16	3	14	28	43	3	14	28	26	15	15
17	3	15	27	52	3	15	27	34	15	16
18	3	16	27	0	3	16	26	42	15	17
19	3	17	26	8	3	17	25	50	15	18
20	3	18	25	17	3	18	24	58	15	19
21	3	19	24	25	3	19	24	7	15	20
22	3	20	23	33	3	20	23	15	16	21
23	3	21	22	42	3	21	22	23	16	22
24	3	22	21	50	3	22	21	31	16	23
25	3	23	20	58	3	23	20	39	16	24
26	3	24	20	7	3	24	19	48	16	25
27	3	25	19	15	3	25	18	56	16	26
28	3	26	18	23	3	26	18	4	16	25
29	3	27	17	32	3	27	17	12	16	28
30	3	28	16	40	3	28	16	30	16	29
31	3	29	15	48	3	29	15	28	16	30

MAY.

Common Year.	Præceſſ. Æqui.	Sun's Longitude.				Sun's Anomaly.				Biſſextile.
		S.	°	′	″	S.	°	′	″	
1	17	3	29	15	48	3	29	15	28	0
2	17	4	0	14	56	4	0	14	36	1
3	17	4	1	14	4	4	1	13	44	2
4	17	4	2	13	12	4	2	12	51	3
5	17	4	3	22	21	4	3	12	0	4
6	17	4	4	11	29	4	4	11	8	5
7	17	4	5	10	37	4	5	10	6	6
8	18	4	6	9	46	4	6	9	25	7
9	18	4	7	8	54	4	7	8	33	8
10	18	4	8	8	2	4	8	7	40	9
11	18	4	9	7	10	4	9	6	48	10
12	18	4	10	6	19	4	10	5	57	11
13	18	4	11	5	27	4	11	5	5	12
14	18	4	12	4	36	4	12	4	14	13
15	18	4	13	3	44	4	13	3	22	14
16	19	4	14	2	52	4	14	2	29	15
17	19	4	15	2	1	4	15	1	38	16
18	19	4	16	1	9	4	16	0	46	17
19	19	4	17	0	17	4	16	59	54	18
20	19	4	17	59	26	4	17	59	3	19
21	19	4	18	58	34	4	18	58	11	20
22	19	4	19	57	42	4	19	57	18	21
23	20	4	20	56	51	4	20	56	27	22
24	20	4	21	55	59	4	21	55	35	23
25	20	4	22	55	7	4	22	54	43	24
26	20	4	23	54	16	4	23	53	52	25
27	20	4	24	53	24	4	24	53	0	26
28	20	4	25	52	32	4	25	52	7	27
29	20	4	26	51	41	4	26	51	16	28
30	20	4	27	50	49	4	27	50	24	25
31	20	4	28	49	57	4	28	49	32	30

Common Year.	JUNE.								Præceſſ. Æqui.	Biſſextile.
	Sun's Longitude.				Sun's Anomaly.					
	S.	°	′	″	S.	°	′	″		
1	4	29	49	6	4	29	48	41	21	0
2	5	0	48	14	5	0	47	50	21	1
3	5	1	47	23	5	1	46	58	21	2
4	5	2	46	31	5	2	46	6	21	3
5	5	3	45	40	5	3	45	14	21	4
6	5	4	44	48	5	4	44	22	21	5
7	5	5	43	56	5	5	43	30	21	6
8	5	6	43	5	5	6	42	39	22	7
9	5	7	42	13	5	7	41	47	22	8
10	5	8	41	21	5	8	40	55	22	9
11	5	9	40	29	5	9	40	3	22	10
12	5	10	39	38	5	10	39	11	22	11
13	5	11	38	46	5	11	38	19	22	12
14	5	12	37	55	5	12	37	27	22	13
15	5	13	37	3	5	13	36	55	23	14
16	5	14	36	11	5	14	35	43	23	15
17	5	15	35	20	5	15	34	51	23	16
18	5	16	34	28	5	16	34	0	23	17
19	5	17	33	36	5	17	33	8	23	18
20	5	18	32	45	5	18	32	17	23	19
21	5	19	31	53	5	19	31	25	23	20
22	5	20	31	1	5	20	30	32	24	21
23	5	21	30	10	5	21	29	31	24	22
24	5	22	29	18	5	22	28	49	24	23
25	5	23	28	26	5	23	27	57	24	24
26	5	24	27	35	5	24	27	6	24	25
27	5	25	26	43	5	25	26	14	24	26
28	5	26	25	51	5	26	25	22	24	27
29	5	27	25	0	5	27	24	30	25	28
30	5	28	24	8	5	28	23	38	25	29
31	5	29	23	16	5	29	22	46	25	30

Common Year.	Præceſſ. Æqui.	JULY. Sun's Longitude. S.	°	'	"	Sun's Anomaly. S.	°	'	"	Biſſextile.
1	25	5	29	23	16	5	29	22	46	0
2	25	6	0	22	24	6	0	21	53	1
3	25	6	1	21	32	6	1	21	1	2
4	25	6	2	20	40	6	2	20	9	3
5	25	6	3	19	49	6	3	19	17	4
6	26	6	4	18	57	6	4	18	25	5
7	26	6	5	18	5	6	5	17	33	6
8	26	6	6	17	14	6	6	16	42	7
9	26	6	7	16	22	6	7	15	50	8
10	26	6	8	15	30	6	8	14	58	9
11	26	6	9	14	38	6	9	14	6	10
12	26	6	10	13	47	6	10	13	14	11
13	27	6	11	12	55	6	11	12	22	12
14	27	6	12	12	4	6	12	11	31	13
15	27	6	13	11	12	6	13	10	39	14
16	27	6	14	10	20	6	14	9	47	15
17	27	6	15	9	29	6	15	8	55	16
18	27	6	16	8	37	6	16	8	3	17
19	27	6	17	7	45	6	17	7	11	18
20	28	6	18	6	54	6	18	6	20	19
21	28	6	19	6	2	6	19	5	28	20
22	28	6	20	5	10	6	20	4	36	21
23	28	6	21	4	19	6	21	3	34	22
24	28	6	22	3	27	6	22	2	52	23
25	28	6	23	2	35	6	23	2	0	24
26	28	6	24	1	44	6	24	1	9	25
27	28	6	25	0	52	6	25	0	17	26
28	29	6	26	0	0	6	25	59	25	27
29	29	6	26	59	9	6	26	58	33	28
30	29	6	27	58	17	6	27	57	41	29
31	29	6	28	57	25	6	28	56	49	30

Common Year.	AUGUST.								*Precess. Æqui.*	*Bissextile.*
	Sun's Longitude.				Sun's Anomaly.					
	S.	°	′	″	S.	°	′	″		
1	6	29	56	33	6	29	55	57	29	0
2	7	0	55	42	7	0	55	6	29	1
3	7	1	54	50	7	1	54	14	29	2
4	7	2	53	58	7	2	53	22	30	3
5	7	3	53	7	7	3	52	30	30	4
6	7	4	52	15	7	4	51	37	30	5
7	7	5	51	23	7	5	50	45	30	6
8	7	6	50	32	7	6	49	53	30	7
9	7	7	49	40	7	7	49	2	30	8
10	7	8	48	48	7	8	48	10	30	9
11	7	9	47	56	7	9	47	18	31	10
12	7	10	47	5	7	10	46	26	31	11
13	7	11	46	13	7	11	45	34	31	12
14	7	12	45	22	7	12	44	43	31	13
15	7	13	44	30	7	13	43	51	31	14
16	7	14	43	38	7	14	42	58	31	15
17	7	15	42	47	7	15	42	7	31	16
18	7	16	41	55	7	16	41	15	31	17
19	7	17	41	3	7	17	40	23	32	18
20	7	18	40	12	7	18	39	32	32	19
21	7	19	39	20	7	19	38	40	32	20
22	7	20	38	28	7	20	37	48	32	21
23	7	21	37	37	7	21	36	56	32	22
24	7	22	36	45	7	22	36	4	32	23
25	7	23	35	53	7	23	35	12	32	24
26	7	24	35	2	7	24	34	21	32	25
27	7	25	34	10	7	25	33	29	33	26
28	7	26	33	18	7	26	32	37	33	27
29	7	27	32	27	7	27	31	45	33	28
30	7	28	31	35	7	28	30	53	33	29
31	7	29	30	43	7	29	30	1	33	30

SEPTEMBER.

Common Year.	*Præceſſ. Æqui.*	Sun's Longitude.				Sun's Anomaly.				*Biſſextile.*
		S.	°	'	"	S.	°	'	"	
1	33	8	0	29	52	8	0	29	10	0
2	34	8	1	29	0	8	1	28	18	1
3	34	8	2	28	9	8	2	27	26	2
4	34	8	3	27	17	8	3	26	35	3
5	34	8	4	26	26	8	4	25	44	4
6	34	8	5	25	34	8	5	24	52	5
7	34	8	6	24	42	8	6	24	0	6
8	34	8	7	23	51	8	7	23	8	7
9	34	8	8	22	59	8	8	22	16	8
10	35	8	9	22	7	8	9	21	24	9
11	35	8	10	21	15	8	10	20	32	10
12	35	8	11	20	24	8	11	19	41	11
13	35	8	12	19	32	8	12	18	50	12
14	35	8	13	18	40	8	13	17	57	13
15	35	8	14	17	48	8	14	17	5	14
16	35	8	15	16	57	8	15	16	13	15
17	36	8	16	16	6	8	16	15	22	16
18	36	8	17	15	14	8	17	14	30	17
19	36	8	18	14	22	8	18	13	38	18
20	36	8	19	13	31	8	19	12	47	19
21	36	8	20	12	39	8	20	11	55	20
22	36	8	21	11	47	8	21	11	3	21
23	36	8	22	10	56	8	22	10	11	22
24	37	8	23	10	4	8	23	9	19	23
25	37	8	24	9	12	8	24	8	27	24
26	37	8	25	8	21	8	25	7	35	25
27	37	8	26	7	29	8	26	6	44	26
28	37	8	27	6	37	8	27	5	52	27
29	37	8	28	5	46	8	28	5	01	28
30	37	8	29	4	54	8	29	4	9	29
31	38	9	0	4	2	9	0	3	17	30

Common Year.	OCTOBER:								Præceſſ. Æqui.	Biſſextile.
	Sun's Longitude.				Sun's Anomaly.					
	S.	°	′	″	S.	°	′	″		
0	9	0	4	2	9	0	3	17	38	0
1	9	1	3	11	9	1	2	25	38	1
2	9	2	2	19	9	2	1	33	38	2
3	9	3	1	27	9	3	0	41	38	3
4	9	4	0	36	9	3	59	50	38	4
5	9	4	59	44	9	4	58	58	38	5
6	9	5	58	52	9	5	58	6	39	6
7	9	6	58	1	9	6	57	14	39	7
8	9	7	57	9	9	7	56	22	39	8
9	9	8	56	17	9	8	55	28	39	9
10	9	9	55	25	9	9	54	36	39	10
11	9	10	54	34	9	10	53	45	39	11
12	9	11	53	42	9	11	52	53	39	12
13	9	12	52	49	9	12	52	2	40	13
14	9	13	51	58	9	13	51	11	40	14
15	9	14	51	7	9	14	50	19	40	15
16	9	15	50	16	9	15	49	28	40	16
17	9	16	49	24	9	16	48	36	40	17
18	9	17	48	32	9	17	47	44	40	18
19	9	18	47	41	9	18	46	52	40	19
20	9	19	46	49	9	19	46	1	41	20
21	9	20	45	57	9	20	45	9	41	21
22	9	21	45	6	9	21	44	17	41	22
23	9	22	44	14	9	22	43	25	41	23
24	9	23	43	22	9	23	42	33	41	24
25	9	24	42	31	9	24	41	41	41	25
26	9	25	41	39	9	25	40	49	41	26
27	9	26	40	47	9	26	39	57	42	27
28	9	27	39	56	9	27	39	5	42	28
29	9	28	39	4	9	28	38	13	42	29
30	9	29	38	12	9	29	37	20	42	30

Common Year.	Præceſſ. Æqui.	NOVEMBER.								Biſſextile.
		Sun's Longitude.				Sun's Anomaly.				
		S.	°	'	"	S.	°	'	"	
1	42	10	0	37	20	10	0	36	28	0
2	42	10	1	36	29	10	1	35	36	1
3	42	10	2	35	37	10	2	34	44	2
4	42	10	3	34	45	10	3	34	52	3
5	42	10	4	33	54	10	4	33	0	4
6	42	10	5	33	2	10	5	32	8	5
7	42	10	6	32	10	10	6	31	16	6
8	43	10	7	31	19	10	7	30	25	7
9	43	10	8	30	27	10	8	29	33	8
10	43	10	9	29	35	10	9	28	40	9
11	43	10	10	28	43	10	10	27	48	10
12	43	10	11	27	52	10	11	26	57	11
13	43	10	12	27	0	10	12	26	5	12
14	43	10	13	26	9	10	13	25	14	13
15	44	10	14	25	17	10	14	24	22	14
16	44	10	15	24	25	10	15	23	29	15
17	44	10	16	23	34	10	16	22	38	16
18	44	10	17	22	42	10	17	21	46	17
19	44	10	18	21	50	10	18	20	54	18
20	44	10	19	20	59	10	19	20	3	19
21	44	10	20	20	7	10	20	19	11	20
22	45	10	21	19	15	10	21	18	18	21
23	45	10	22	18	24	10	22	17	27	22
24	55	10	23	17	32	10	23	16	35	23
25	45	10	24	16	40	10	24	15	43	24
26	45	10	25	15	49	10	25	14	52	25
27	45	10	26	14	57	10	26	14	0	26
28	45	10	27	14	5	10	27	13	8	27
29	46	10	28	13	14	10	28	12	16	28
30	46	10	29	12	22	10	29	11	24	29
31	46	11	0	11	30	11	0	10	32	30

Common Year.	DECEMBER.								*Præceſſ. Æqui.*	*Biſſextile.*
	Sun's Longitude.				Sun's Anomaly.					
	S.	°	′	″	S.	°	′	″		
1	11	0	11	30	11	0	10	32	46	0
2	11	1	10	39	11	1	9	40	46	1
3	11	2	9	47	11	2	8	48	46	2
4	11	3	8	55	11	3	7	56	46	3
5	11	4	8	4	11	4	7	4	47	4
6	11	5	7	12	11	5	6	12	47	5
7	11	6	6	20	11	6	5	20	47	6
8	11	7	5	29	11	7	4	28	47	7
9	11	8	4	37	11	8	3	36	47	8
10	11	9	3	45	11	9	2	44	47	9
11	11	10	2	53	11	10	1	52	47	10
12	11	11	2	2	11	11	1	0	48	11
13	11	12	1	10	11	12	0	8	48	12
14	11	13	0	19	11	12	59	17	48	13
15	11	13	59	27	11	13	58	25	48	14
16	11	14	58	35	11	14	57	33	48	15
17	11	15	57	44	11	15	56	42	48	16
18	11	16	56	52	11	16	55	50	48	17
19	11	17	56	0	11	17	54	58	48	18
20	11	18	55	9	11	18	54	6	49	19
21	11	19	54	17	11	19	53	14	49	20
22	11	20	53	25	11	20	52	22	49	21
23	11	21	52	34	11	21	51	30	49	22
24	11	22	51	42	11	22	50	39	49	23
25	11	23	50	50	11	23	49	47	49	24
26	11	24	49	59	11	24	48	55	49	25
27	11	25	49	7	11	25	48	3	49	26
28	11	26	48	15	11	26	47	11	50	27
29	11	27	47	24	11	27	46	19	50	28
30	11	28	46	32	11	28	45	28	50	29
31	11	29	45	40	11	29	44	37	50	30

H. ′ ″ ‴	*Sun's Longit.* ° ′ ″ ‴	 ′ ″ ‴ ⁗	 ″ ‴ ⁗ V.	*Sun's Anomaly.* ° ′ ″ ‴	 ′ ″ ‴ ⁗	 ″ ‴ ⁗ V.
1	0	2	28	0	2	28
2	0	4	56	0	4	56
3	0	7	24	0	7	24
4	0	9	51	0	9	51
5	0	12	19	0	12	19
6	0	14	47	0	14	47
7	0	17	15	0	17	15
8	0	19	43	0	19	43
9	0	22	11	0	22	11
10	0	24	38	0	24	38
11	0	27	6	0	27	6
12	0	29	34	0	29	34
13	0	32	2	0	32	2
14	0	34	30	0	34	30
15	0	36	58	0	36	58
16	0	39	25	0	39	25
17	0	41	53	0	41	53
18	0	44	21	0	44	21
19	0	46	49	0	46	49
20	0	49	17	0	49	17
21	0	51	45	0	51	45
22	0	54	13	0	54	13
23	0	[illegible] 56	[illegible]	0	43	[illegible]
24	0	59	8	0	59	8
25	1	1	36	1	1	36
26	1	4	4	1	4	4
27	1	6	32	1	6	32
28	1	9	0	1	9	0
29	1	11	27	1	11	27
30	1	13	55	1	13	55

	Sun's Longitude.			Sun's Anomaly.		
H. ′ ″ ‴	° ′ ″ ‴	′ ″ ‴ ⁗	″ ‴ ⁗ V.	° ′ ″ ‴	′ ″ ‴ ⁗	″ ‴ ⁗ V.
31	1	16	23	1	16	23
32	1	18	51	1	18	51
33	1	21	19	1	21	19
34	1	23	47	1	23	47
35	1	26	15	1	26	15
36	1	28	43	1	28	43
37	1	31	11	1	31	11
38	1	33	39	1	33	39
39	1	36	6	1	36	6
40	1	38	44	1	38	44
41	1	41	2	1	41	2
42	1	43	30	1	43	30
43	1	45	58	1	45	58
44	1	48	25	1	48	25
45	1	50	53	1	50	53
46	1	53	21	1	53	21
47	1	55	49	1	55	49
48	1	58	17	1	58	17
49	2	0	44	2	0	44
50	2	3	12	2	3	12
51	2	5	40	2	5	40
52	2	8	8	2	8	8
53	2	10	36	2	10	36
54	2	13	3	2	13	3
55	2	15	31	2	15	31
56	2	17	59	2	17	59
57	2	20	27	2	20	27
58	2	22	55	2	22	55
59	2	25	23	2	25	23
60	2	27	51	2	27	51

Mean Ano.	Sign 0 ſubtract.				Sign 1 ſubtract.				Mean Ano.
	Equation.			Logar.	*Equation.*			Logar.	
	°	′	″		°	′	″		
0	0	0	0	5.007286	0	57	7	5.006347	30
1	0	1	59	5.007285	0	58	51	5.006284	29
2	0	3	59	5.007282	1	0	33	5.006220	28
3	0	5	58	5.007277	1	2	15	5.006154	27
4	0	7	57	5.007269	1	3	55	5.006087	26
5	0	9	56	5.007260	1	5	35	5.006018	25
6	0	11	55	5.007249	1	7	14	5.005946	24
7	0	13	53	5.007235	1	8	51	5.005872	23
8	0	15	51	5.007218	1	10	27	5.005797	22
9	0	17	49	5.007200	1	12	1	5.005720	21
10	0	19	47	5.007180	1	13	35	5.005642	20
11	0	21	45	5.007158	1	15	7	5.005562	19
12	0	23	42	5.007134	1	16	38	5.005480	18
13	0	25	38	5.007107	1	18	7	5.005397	17
14	0	27	35	5.007079	1	19	36	5.005312	16
15	0	29	30	5.007048	1	21	3	5.005225	15
16	0	31	25	5.007015	1	22	28	5.005136	14
17	0	33	20	5.006980	1	24	51	5.005047	13
18	0	35	14	5.006943	1	25	54	5.004956	12
19	0	37	8	5.006905	1	26	35	5.004863	11
20	0	39	1	5.006864	1	27	55	5.004768	10
21	0	40	53	5.006821	1	29	13	5.004672	9
22	0	42	44	5.006776	1	30	29	5.004575	8
23	0	44	35	5.006730	1	31	43	5.004477	7
24	0	46	25	5.006681	1	32	56	5.004377	6
25	0	48	14	5.006631	1	34	8	5.004275	5
26	0	50	2	5.006577	1	35	18	5.004173	4
27	0	51	50	5.006522	1	36	26	5.004069	3
28	0	53	36	5.006466	1	37	33	5.003963	2
29	0	55	22	5.006408	1	38	38	5.003857	1
30	0	57	7	5.006347	1	39	41	5.003749	0
	Sign 11 *add.*				*Sign* 10 *add.*				

Mean Ano.	Sign 2 ſubtract.				Sign 3 ſubtract.				Mean Ano.
	Equation.			*Logar.*	*Equation.*			*Logar.*	
	°	′	″		°	′	″		
0	1	39	41	5.003749	1	56	19	5.000124	30
1	1	40	42	5.003640	1	56	20	4.999995	29
2	1	41	41	5.003531	1	56	19	4.999867	28
3	1	42	39	5.003420	1	56	16	4.999739	27
4	1	43	35	5.003307	1	56	12	4.999611	26
5	1	44	29	5.003194	1	56	5	4.999483	25
6	1	45	21	5.003080	1	55	56	4.999354	24
7	1	46	11	5.002965	1	55	45	4.999227	23
8	1	47	0	5.002849	1	55	31	4.999099	22
9	1	47	46	5.002732	1	55	15	4.998971	21
10	1	48	31	5.002614	1	54	58	4.998844	20
11	1	49	13	5.002495	1	54	38	4.998717	19
12	1	49	53	5.002375	1	54	16	4.998590	18
13	1	50	32	5.002254	1	53	52	4.998463	17
14	1	51	9	5.002134	1	53	26	4.998336	16
15	1	51	44	5.002012	1	52	58	4.998210	15
16	1	52	17	5.001890	1	52	27	4.998084	14
17	1	52	48	5.001767	1	51	55	4.997960	13
18	1	53	16	5.001643	1	51	20	4.997837	12
19	1	53	43	5.001518	1	50	44	4.997714	11
20	1	54	7	5.001393	1	50	5	4.997591	10
21	1	54	30	5.001268	1	49	24	4.997468	9
22	1	54	50	5.001142	1	48	42	4.997347	8
23	1	55	9	5.001016	1	47	57	4.997226	7
24	1	55	25	5.000889	1	47	11	4.997106	6
25	1	55	39	5.000762	1	46	22	4.996987	5
26	1	55	51	5.000635	1	45	31	4.996868	4
27	1	56	1	5.000508	1	44	38	4.996750	3
28	1	56	9	5.000380	1	43	43	4.996634	2
29	1	56	15	5.000252	1	42	47	4.996519	1
30	1	56	19	5.000124	1	41	48	4.996405	0
	Sign 9 add.				*Sign 8 add.*				

Mean Ano.	Sign 4 ſubtract.				Sign 5 ſubtract.				Mean Ano.
	Equation.			*Logar.*	*Equation.*			*Logar.*	
	°	′	″		°	′	″		
0	1	41	48	4.996405	0	59	15	4.993620	30
1	1	40	48	4.996299	0	57	26	4.993555	29
2	1	39	46	4.996180	0	55	37	4.993491	28
3	1	38	41	4.996069	0	53	48	4.993429	27
4	1	37	35	4.995959	0	51	57	4.993369	26
5	1	36	27	4.995850	0	50	5	4.993311	25
6	1	35	17	4.995742	0	48	13	4.993255	24
7	1	34	5	4.997636	0	46	19	4.993201	23
8	1	32	52	4.995531	0	44	25	4.993150	22
9	1	31	37	4.995427	0	42	30	4.993102	21
10	1	30	20	4.995325	0	40	34	4.993055	20
11	1	29	1	4.995224	0	38	37	4.993009	19
12	1	27	41	4.995126	0	36	40	4.992966	18
13	1	26	19	4.995028	0	34	41	4.992926	17
14	1	24	55	4.994932	0	32	42	4.992888	16
15	1	23	30	4.994836	0	30	43	4.992852	15
16	1	22	3	4.994743	0	28	43	4.992818	14
17	1	20	35	4.994652	0	26	42	4.992786	13
18	1	19	5	4.994562	0	24	41	4.992757	12
19	1	17	33	4.994474	0	22	39	4.992731	11
20	1	16	0	4.994387	0	20	37	4.992706	10
21	1	14	26	4.994302	0	18	34	4.992683	9
22	1	12	50	4.994219	0	16	31	4.992663	8
23	1	11	13	4.994138	0	14	28	4.992646	7
24	1	9	34	4.994058	0	12	24	4.992631	6
25	1	7	54	4.993982	0	10	21	4.992618	5
26	1	6	13	4.993904	0	8	17	4.992607	4
27	1	4	31	4.993831	0	6	13	4.992599	3
28	1	3	47	4.993759	0	4	9	4.992593	2
29	1	1	2	4.993688	0	2	4	4.992590	1
30	0	59	15	4.993620	0	0	0	4.992589	0

Sign 7 add.　　*Sign 6 add.*

Years Compl.	*Moon's Longitude.*				*Moon's Anomaly.*				*Moon's Node.*			
	S.	°	′	″	S.	°	′	″	S.	°	′	″
1	4	9	23	03	2	28	43	13	0	19	19	43
2	8	18	46	07	5	27	26	25	1	8	39	26
3	0	28	9	10	8	26	9	36	1	27	59	9
B 4	5	20	42	49	0	7	56	45	2	17	22	3
5	10	0	5	52	3	6	39	57	3	6	41	46
6	2	9	28	55	6	5	23	9	3	26	1	29
7	6	18	51	59	9	4	6	21	4	15	21	12
B 8	11	11	25	37	0	15	53	30	5	4	44	5
9	3	20	48	41	3	14	36	42	5	24	3	49
10	8	0	11	44	6	13	19	54	6	13	23	33
11	0	9	34	48	9	12	3	6	7	2	43	16
B 12	5	2	8	27	0	23	50	17	7	22	6	9
13	9	11	31	30	3	22	33	29	8	11	25	52
14	1	20	54	34	6	21	16	41	9	0	45	35
15	6	0	17	37	9	19	59	53	9	20	5	18
B 16	10	22	51	16	1	1	47	3	10	9	28	12
17	3	2	14	19	4	0	30	15	10	28	47	56
18	7	11	37	22	6	29	13	27	11	18	7	39
19	11	21	0	26	9	27	56	39	0	7	27	22
B 20	4	13	34	5	1	9	43	50	0	26	50	15
40	8	27	8	10	2	19	27	40	1	23	40	31
60	1	10	42	15	3	29	11	30	2	20	30	46
86	5	24	16	20	5	8	55	20	3	17	21	1
100	10	7	50	25	6	18	39	10	4	14	11	15
200	8	15	40	50	1	7	18	20	8	28	22	30
300	6	23	31	15	7	25	57	30	1	12	33	45
400	5	1	21	40	2	14	36	40	5	26	45	0
500	3	9	12	5	9	3	15	50	10	10	56	15
600	1	17	2	30	3	21	55	0	2	25	7	30
700	11	24	52	55	10	10	34	10	7	9	18	45
800	10	2	43	20	4	29	13	20	11	23	30	0
900	8	10	33	45	11	17	52	30	4	7	41	15
1000	6	18	24	10	6	6	31	40	8	21	52	30
2000	1	6	48	20	0	13	3	20	5	13	45	0
3000	7	25	12	30	6	19	35	0	2	5	37	30
4000	2	13	36	40	0	26	6	40	10	27	30	0

Years of Christ	*Moon's Longitude.*				*Moon's Anomaly.*				*Moon's Node.*			
	S.	°	′	″	S.	°	′	″	S.	°	′	″
1	4	2	2	55	6	19	54	10	8	28	34	35
101	2	9	53	20	1	8	33	20	4	14	23	20
201	0	17	43	45	7	27	12	30	0	0	12	5
301	10	25	34	10	2	15	51	40	7	16	0	50
401	9	3	24	35	9	4	30	50	3	1	49	35
501	7	11	15	0	3	23	10	0	10	17	38	20
601	5	19	5	25	10	11	49	10	6	3	27	5
701	3	26	55	50	5	0	28	20	1	19	15	50
801	2	4	46	15	11	19	7	30	9	5	4	35
901	0	12	36	40	6	7	46	40	4	20	53	20
1001	10	20	27	5	0	26	25	50	0	6	42	2
1101	8	28	17	30	7	15	5	50	7	22	30	50
1201	7	6	7	55	2	3	44	10	3	8	19	35
1301	5	13	58	20	8	22	23	20	10	24	8	20
1401	3	21	48	45	3	11	2	30	6	9	57	5
1501	1	29	39	10	9	29	41	40	1	25	45	50
1601	0	7	29	35	4	18	20	50	9	11	34	35
1701	10	15	20	0	11	7	0	0	4	27	23	20
1801	8	23	10	25	5	25	39	10	0	13	12	5
1901	7	1	0	50	11	14	18	20	7	29	0	50
2001	5	8	51	15	6	2	57	30	3	14	49	35
1678	4	20	26	9	0	18	2	36	7	22	15	55
1679	8	29	49	13	3	16	45	50	7	2	56	12
1680	1	9	12	16	6	15	29	2	6	13	36	29
1681	6	1	45	55	9	27	16	10	5	24	13	35
1682	10	11	8	58	0	25	59	22	5	4	52	52
1683	2	20	32	1	3	24	42	35	4	15	34	9
1684	6	29	55	4	6	23	25	47	3	26	14	26
1685	11	22	28	42	10	5	12	54	3	6	51	32
1686	4	1	51	45	1	3	56	8	2	17	31	49
1687	8	11	14	48	4	2	39	20	1	28	12	6
1688	0	20	37	51	7	1	22	34	1	8	53	23
1689	5	13	11	30	10	13	9	40	0	19	29	29
1690	9	22	34	34	1	11	52	52	0	0	9	46
1691	2	1	57	38	4	10	36	4	11	10	50	3
1692	6	11	20	42	7	9	19	18	10	21	30	20

Years of Christ	*Moon's Longitude.*				*Moon's Anomaly.*				*Moon's Node.*			
	S.	°	′	″	S.	°	′	″	S.	°	′	″
1693	11	3	54	21	10	21	6	26	10	02	07	26
1694	3	13	17	24	1	19	49	39	09	12	47	43
1695	7	22	40	27	4	18	32	51	08	23	28	00
1696	0	2	3	31	7	17	16	5	08	04	18	17
1697	4	24	37	34	10	29	3	13	07	14	55	23
1698	9	4	0	12	1	27	46	26	06	25	35	40
1699	1	13	23	17	4	26	29	39	06	06	15	57
1700	5	22	46	21	7	25	12	40	05	16	56	14
1701	10	15	20	0	11	7	0	00	04	27	23	20
1702	2	24	43	3	2	5	43	13	04	08	03	37
1703	7	4	6	6	5	4	26	26	03	18	43	54
1704	11	13	29	9	8	3	9	39	02	29	24	11
1705	4	6	2	47	11	14	56	46	02	10	01	17
1706	8	15	25	50	2	12	39	59	01	20	41	34
1707	0	24	48	53	5	12	23	12	01	01	21	51
1708	5	4	11	56	8	11	6	25	00	12	02	08
1709	9	26	45	34	11	22	53	32	11	22	39	14
1710	2	6	8	38	0	21	36	45	11	03	19	31
1711	6	15	31	40	3	20	19	58	10	13	59	48
1712	10	24	54	45	6	19	3	11	09	24	40	05
1713	3	17	28	24	10	0	5	18	09	05	17	11
1714	7	26	51	27	0	29	33	31	08	15	57	28
1715	0	6	14	31	3	28	16	46	07	26	37	45
1716	4	15	37	36	6	26	59	56	07	07	18	02
1717	9	8	11	15	10	8	47	03	06	17	55	08
1718	1	17	34	19	1	7	30	16	05	28	35	25
1719	5	26	57	23	4	6	13	29	05	09	15	42
1720	10	6	20	27	7	4	5	43	04	19	55	59
1721	2	28	54	5	0	16	43	50	04	00	33	05
1722	7	8	17	8	3	15	27	03	03	11	13	22
1723	11	17	40	11	6	14	10	10	02	21	53	39
1724	3	27	3	14	9	12	53	29	02	02	33	56
1725	8	19	36	52	0	24	40	36	01	13	11	02
1726	0	28	59	55	3	23	23	49	00	23	51	19
1727	5	8	22	58	6	22	7	02	00	04	31	36
1728	9	17	46	1	9	20	50	15	11	15	11	53

Years of Christ	*Moon's Longitude.*				*Moon's Anomaly.*				*Moon's Node.*			
	S.	°	'	"	S.	°	'	"	S.	°	'	"
1729	2	10	19	39	1	2	37	22	10	25	48	59
1730	6	19	42	42	4	1	20	35	10	06	29	16
1731	10	29	5	46	7	0	3	48	09	17	09	33
1732	3	8	28	50	9	28	47	1	08	27	49	50
1733	8	1	2	29	1	10	34	8	08	08	26	56
1734	0	10	25	33	4	9	17	21	07	19	07	13
1735	4	19	48	37	7	8	0	34	06	29	47	30
1736	8	29	11	41	10	6	43	47	06	10	27	47
1737	1	21	45	20	1	18	30	54	05	21	04	53
1738	6	1	8	24	4	17	14	7	05	01	45	10
1739	10	10	31	28	7	15	57	20	04	12	25	27
1740	2	19	54	32	10	14	40	33	03	23	05	44
1741	7	12	28	10	1	26	27	40	03	03	42	50
1742	11	21	51	13	4	25	10	53	02	14	23	07
1743	4	1	14	17	7	23	54	6	01	25	03	24
1744	8	10	37	19	10	32	37	19	01	05	43	41
1745	1	3	10	58	2	4	24	26	00	16	20	47
1746	5	12	34	1	5	3	7	39	11	27	01	04
1747	9	21	57	5	8	1	50	52	11	07	41	21
1748	2	1	20	8	11	0	34	5	10	18	21	38
1749	6	23	53	47	2	12	21	12	09	28	58	44
1750	11	3	16	49	5	11	4	25	09	09	39	01
1751	3	12	39	54	8	9	47	38	08	20	19	18
1752	7	22	2	57	11	8	30	51	08	00	59	35
1753	0	14	36	36	2	20	17	58	07	11	36	41
1754	4	23	59	39	5	19	1	11	06	22	16	58
1755	9	3	22	42	8	17	44	24	06	02	57	15
1756	1	12	45	46	11	16	27	37	05	13	32	32
1757	6	5	19	26	2	28	14	44	04	24	14	38
1758	10	14	42	30	5	26	57	57	04	04	54	55
1759	2	24	5	34	8	25	41	10	03	15	35	12
1760	7	3	28	37	11	24	24	23	02	26	15	29
1761	11	26	2	15	3	6	11	20	02	06	52	35
1762	4	5	25	18	6	4	54	43	01	17	32	52
1763	8	14	48	22	9	3	37	56	00	28	13	09
1764	0	24	11	25	0	2	21	9	00	08	53	26

Years of Christ	*Moon's Longitude.*				*Moon's Anomaly.*				*Moon's Node.*			
	S.	°	'	"	S.	°	'	"	S.	°	'	"
1765	5	16	45	4	3	14	8	16	11	19	30	32
1766	9	26	8	8	6	12	51	21	11	00	10	49
1767	2	5	31	11	9	11	34	42	10	10	51	06
1768	6	14	54	15	0	10	17	55	09	21	31	23
1769	11	7	27	54	3	22	5	2	09	02	08	29
1770	3	16	50	57	6	20	48	15	08	12	48	46
1771	7	26	14	1	9	19	31	28	07	23	29	03
1772	0	5	37	4	0	18	14	41	07	04	09	20
1773	4	28	10	43	4	0	1	48	06	14	46	26
1774	9	7	33	46	6	28	45	1	05	25	26	43
1775	1	16	56	50	9	27	28	14	05	06	07	00
1776	5	26	19	53	0	26	11	27	04	16	47	17
1777	10	18	53	32	4	7	58	34	03	27	24	23
1778	2	28	16	35	7	6	41	47	03	08	04	40
1779	7	7	39	39	10	5	25	0	02	18	44	57
1780	11	17	2	42	1	4	8	13	01	29	25	14
1781	4	9	36	20	4	15	55	20	01	10	02	20
1782	8	18	59	23	7	14	38	33	00	20	42	37
1783	0	28	22	27	10	13	21	46	00	01	22	54
1784	5	7	45	30	1	12	4	59	11	12	03	11
1785	10	0	19	9	4	23	52	6	10	22	40	17
1786	2	9	42	12	7	22	35	19	10	03	20	34
1787	6	19	5	16	10	21	18	32	09	14	00	51
1788	10	28	28	19	1	20	1	45	08	24	41	08
1789	3	21	1	57	5	1	48	52	00	05	18	14
1790	8	0	25	1	8	0	32	5	07	15	58	31
1791	0	9	48	4	10	29	15	18	06	26	38	48
1792	4	19	11	8	1	27	58	31	06	07	19	05
1793	9	11	44	47	5	9	45	38	05	17	56	11
1794	1	21	7	50	8	8	28	51	04	28	36	28
1795	6	0	30	54	11	7	12	4	04	09	16	45
1796	10	9	53	57	2	5	55	17	03	19	57	02
1797	3	2	27	36	5	17	42	24	03	00	34	08
1798	7	11	50	59	8	16	25	37	02	11	14	25
1799	11	21	13	43	11	15	8	50	01	21	54	42
1800	4	0	36	46	2	13	52	3	01	02	34	59

Years of Christ	Moon's Longitude				Moon's Anomaly.				Moon's Node.			
	S.	°	′	″	S.	°	′	″	S.	°	′	″
1801	8	23	10	25	5	25	39	10	0	13	12	5
1802	1	2	33	28	8	24	22	23	11	23	52	22
1803	5	11	56	32	11	23	5	36	11	4	32	39
1804	9	21	19	35	2	21	48	49	10	15	12	56
1805	2	13	53	14	6	3	35	56	9	25	50	2
1806	6	23	16	17	9	2	19	9	9	6	30	19
1807	11	2	39	21	0	1	2	22	8	17	10	36
1808	3	12	2	24	2	29	45	35	7	27	50	53
1809	8	4	36	3	6	11	32	42	7	8	27	59
1810	0	13	59	6	9	10	15	55	6	19	8	16
1811	4	23	22	10	0	8	59	8	5	29	48	32
1812	9	2	45	13	3	7	42	21	5	10	28	50
1813	1	25	18	51	6	19	29	28	4	21	5	56
1814	6	4	41	55	9	18	12	41	4	1	46	13
1815	10	14	4	58	0	16	55	54	3	12	26	30
1816	2	23	28	2	3	15	39	7	2	23	6	47
1817	7	16	1	41	6	27	26	14	2	3	43	53
1818	11	25	24	44	9	26	9	27	1	14	24	10
1819	4	4	47	48	0	24	52	40	0	25	4	27
1820	8	27	10	51	3	23	35	53	0	5	44	44
1821	1	6	44	30	7	5	23	0	11	16	21	50
1822	5	56	7	33	10	4	6	13	10	27	2	7
1823	9	25	30	37	1	2	49	26	10	7	42	24
1824	2	4	53	41	4	1	32	39	9	18	22	41
1825	6	27	27	19	7	13	19	46	8	28	59	47
1826	11	6	50	23	10	12	2	59	8	9	40	4
1827	3	16	13	26	1	10	46	12	7	20	20	21
1828	7	25	36	30	4	9	29	25	7	1	0	38
1829	0	18	10	9	7	21	16	32	6	11	57	44
1830	4	27	33	12	10	19	59	45	5	22	18	1
1831	9	6	56	15	1	18	42	58	5	2	58	18
1832	1	16	19	18	4	17	26	11	4	13	38	35
1833	6	8	52	57	7	29	13	18	3	24	15	41
1834	10	18	16	0	10	27	56	31	3	4	55	58
1835	2	27	39	4	1	26	39	44	2	15	36	15
1836	7	7	2	7	4	25	22	57	1	26	16	32

JANUARY.

Common Year.	Moon's Longitude S.	°	′	″	Moon's Anomaly S.	°	′	″	Moon's Node. S.	°	′	″	*Biſſextile.*
1	0	13	10	35	0	13	3	54	0	0	3	11	0
2	0	26	21	10	0	26	7	48	0	0	6	21	1
3	1	9	31	45	1	9	11	42	0	0	9	32	2
4	1	22	42	20	1	22	15	36	0	0	12	43	3
5	2	5	52	55	2	5	19	30	0	0	15	53	4
6	2	19	3	30	2	18	23	24	0	0	19	4	5
7	3	2	14	5	3	1	27	18	0	0	22	14	6
8	3	15	24	40	3	14	31	12	0	0	25	25	7
9	3	28	35	15	3	27	35	6	0	0	28	36	8
10	4	11	45	50	4	10	39	0	0	0	31	46	9
11	4	24	56	25	4	23	42	53	0	0	34	57	10
12	5	8	7	0	5	6	46	47	0	0	38	8	11
13	5	21	17	35	5	19	50	41	0	0	42	18	12
14	6	4	28	10	6	2	54	35	0	0	44	29	13
15	6	17	38	45	6	15	58	29	0	0	47	40	14
16	7	0	49	20	6	29	2	23	0	0	50	50	15
17	7	13	59	55	7	12	6	17	0	0	54	1	16
18	7	27	10	30	7	25	10	11	0	0	57	11	17
19	8	10	21	5	8	8	14	5	0	1	0	22	18
20	8	23	31	40	8	21	17	59	0	1	3	33	19
21	9	6	42	15	9	4	21	53	0	1	6	43	20
22	9	19	52	50	9	17	25	47	0	1	9	54	21
23	10	3	3	25	10	0	29	41	0	1	13	5	22
24	10	16	14	0	10	13	33	35	0	1	16	15	23
25	10	29	24	35	10	26	37	29	0	1	29	26	24
26	11	12	35	10	11	9	41	23	0	1	22	37	25
27	11	25	45	45	11	22	45	17	0	1	25	47	26
28	0	8	56	20	0	5	49	11	0	1	28	58	27
29	0	22	6	55	0	18	53	5	0	1	32	9	28
30	1	5	17	31	1	1	56	59	0	1	35	19	29
31	1	18	28	6	1	15	0	53	0	1	38	30	30

FEBRUARY.

Common Year.	Moon's Longitude				Moon's Anomaly.				Moon's Node.				Biſſextile.
	S.	°	'	"	S.	°	'	"	S.	°	'	"	
1	2	1	38	41	1	28	4	47	0	1	41	41	0
2	2	14	49	16	2	11	8	41	0	1	44	50	1
3	2	27	59	51	2	24	12	35	0	1	48	1	2
4	3	11	10	26	3	7	16	28	0	1	51	12	3
5	3	24	21	1	3	20	20	22	0	1	54	23	4
6	4	7	32	36	4	3	24	16	0	1	57	33	5
7	4	20	42	11	4	16	28	10	0	2	0	44	6
8	5	3	52	46	4	29	32	4	0	2	3	54	7
9	5	17	3	21	5	12	35	57	0	2	7	6	8
10	6	0	13	56	5	25	39	51	0	2	10	16	9
11	6	13	24	31	6	8	43	45	0	2	13	27	10
12	6	26	35	6	6	21	47	39	0	2	16	37	11
13	7	9	45	41	7	4	51	32	0	2	19	48	12
14	7	22	56	15	7	17	55	26	0	2	22	59	13
15	8	6	6	50	8	0	59	21	0	2	26	9	14
16	8	19	17	26	8	14	3	14	0	2	29	20	15
17	9	2	28	1	8	27	7	8	0	2	32	30	16
18	9	15	38	36	9	10	11	2	0	2	35	41	17
19	9	28	49	11	9	23	14	56	0	2	38	52	18
20	10	11	59	46	10	6	18	50	0	2	42	2	19
21	10	25	10	21	10	19	22	44	0	2	45	13	20
22	11	8	20	56	11	2	26	38	0	2	48	23	21
23	11	21	31	31	11	15	30	32	0	2	51	34	22
24	0	4	42	6	11	28	34	26	0	2	54	45	23
25	0	17	52	41	0	11	38	20	0	2	57	55	24
26	1	1	3	15	0	24	42	14	0	3	1	6	25
27	1	14	13	51	1	7	46	8	0	3	4	16	26
28	1	27	24	26	1	20	50	2	0	3	7	27	27
29	2	10	35	1	2	3	53	56	0	3	10	38	28
30													29
31													30

M A R C H.

Common Year.	Moon's Longitude				Moon's Anomaly.				Moon's Node.				Bissextile.
	S.	°	′	″	S.	°	′	″	S.	°	′	″	
1	2	10	35	1	2	3	53	56	0	3	10	38	0
2	2	23	45	36	2	16	57	50	0	3	13	49	1
3	3	6	56	11	3	0	1	44	0	3	16	59	2
4	3	20	6	46	3	13	5	38	0	3	20	10	3
5	4	3	17	21	3	26	9	32	0	3	23	20	4
6	4	16	27	56	4	9	13	26	0	3	26	31	5
7	4	29	38	31	4	22	17	20	0	3	29	42	6
8	5	12	49	6	5	5	21	14	0	3	32	52	7
9	5	25	59	41	5	18	25	8	0	3	36	3	8
10	6	9	10	16	6	1	29	2	0	3	39	14	9
11	6	22	20	51	6	14	32	56	0	3	42	25	10
12	7	5	31	26	6	27	36	50	0	3	45	36	11
13	7	18	42	1	7	10	40	44	0	3	48	46	12
14	8	1	52	36	7	23	44	36	0	3	51	56	13
15	8	15	3	11	8	6	48	32	0	3	55	7	14
16	8	28	13	46	8	19	52	26	0	3	58	18	15
17	9	11	24	21	9	2	56	20	0	4	1	28	16
18	9	24	34	56	9	16	0	14	0	4	4	39	17
19	10	7	45	31	9	29	4	8	0	4	7	49	18
20	10	20	56	7	10	12	8	2	0	4	11	0	19
21	11	4	6	42	10	25	11	56	0	4	14	11	20
22	11	17	17	17	11	8	15	50	0	4	17	22	21
23	0	0	27	52	11	21	19	44	0	4	20	32	22
24	0	13	38	27	0	4	23	38	0	4	23	43	23
25	0	26	49	2	0	17	27	32	0	4	26	53	24
26	1	9	59	37	1	0	31	26	0	4	30	4	25
27	1	23	10	12	1	13	35	20	0	4	33	15	26
28	2	6	20	47	1	26	39	14	0	4	36	25	27
29	2	19	31	22	2	9	43	8	0	4	39	36	28
30	3	2	41	57	2	22	47	2	0	4	42	47	29
31	3	15	52	32	3	5	50	56	0	4	45	58	30

A P R I L.

Common Year.	Moon's Longitude				Moon's Anomaly				Moon's Node.				*Biſſextile.*
	S.	°	′	″	S.	°	′	″	S.	°	′	″	
1	3	29	3	7	3	18	54	50	0	4	49	8	0
2	4	12	13	42	4	1	58	44	0	4	52	19	1
3	4	25	24	17	4	15	2	38	0	4	55	29	2
4	5	8	34	52	4	28	6	32	0	4	58	40	3
5	5	21	45	27	5	11	19	26	0	5	1	51	4
6	6	4	56	2	5	24	14	20	0	5	5	1	5
7	6	18	6	38	6	7	18	14	0	5	8	12	6
8	7	1	17	12	6	20	22	8	0	5	11	22	7
9	7	14	27	47	7	3	26	2	0	5	14	33	8
10	7	27	38	22	7	16	29	56	0	5	17	44	9
11	8	10	48	57	7	29	33	50	0	5	20	54	10
12	8	23	59	32	8	12	37	44	0	5	24	5	11
13	9	7	10	7	8	25	41	38	0	5	27	16	12
14	9	20	20	42	9	8	45	32	0	5	30	26	13
15	10	3	31	17	9	21	49	26	0	5	33	37	14
16	10	16	41	52	10	4	53	20	0	5	36	48	15
17	10	29	52	27	10	17	57	14	0	5	39	58	16
18	11	13	3	2	11	1	1	8	0	5	43	9	17
19	11	26	13	37	11	14	5	2	0	5	46	15	18
20	0	9	24	12	11	27	8	56	0	5	49	31	19
21	0	22	34	47	0	10	12	43	0	5	52	41	20
22	1	5	45	22	0	25	16	42	0	5	55	52	21
23	1	18	55	57	1	6	20	36	0	5	59	2	22
24	2	2	6	32	1	19	24	30	0	6	2	13	23
25	2	15	17	7	2	2	28	24	0	6	5	24	24
26	2	28	27	42	2	15	32	18	0	6	8	34	25
27	3	11	38	17	2	28	36	12	0	6	11	45	26
28	3	24	48	52	3	11	40	6	0	6	14	56	27
29	4	7	59	27	3	24	44	0	0	6	18	6	28
30	4	21	10	3	4	7	47	54	0	6	21	17	29
31	5	4	20	37	4	20	51	48	0	6	24	27	30

M A Y.

Common Year.	Moon's Longitude				Moon's Anomaly.				Moon's Node.				Bissextile.
	S.	°	′	″	S.	°	′	″	S.	°	′	″	
1	5	4	20	37	04	20	51	48	0	6	24	27	0
2	5	17	31	12	05	03	55	42	0	6	27	38	1
3	6	0	41	47	05	16	59	36	0	6	30	48	2
4	6	13	52	22	06	00	03	30	0	6	33	59	3
5	6	27	2	57	06	13	07	24	0	6	37	10	4
6	7	10	13	32	06	26	11	18	0	6	40	20	5
7	7	23	24	7	07	09	15	12	0	6	43	31	6
8	8	6	34	42	07	22	19	06	0	6	46	41	7
9	8	19	45	17	08	05	22	00	0	6	49	52	8
10	9	2	55	53	08	18	26	54	0	6	53	03	9
11	9	16	6	27	09	01	30	48	0	6	56	14	10
12	9	29	17	3	09	14	34	42	0	6	59	24	11
13	10	12	27	38	09	27	38	36	0	7	02	34	12
14	10	25	38	13	10	10	42	30	0	7	05	45	13
15	11	8	48	48	10	23	46	24	0	7	08	56	14
16	11	21	59	23	11	06	50	18	0	7	12	06	15
17	0	5	9	58	11	19	54	12	0	7	15	17	16
18	0	18	20	33	00	02	58	06	0	7	18	27	17
19	1	1	31	8	00	16	02	00	0	7	21	38	18
20	1	14	41	43	00	29	05	54	0	7	24	49	19
21	1	27	52	18	01	12	09	48	0	7	28	00	20
22	2	11	2	53	01	25	13	42	0	7	31	10	21
23	2	24	13	28	02	08	17	36	0	7	34	21	22
24	3	7	24	3	02	21	21	30	0	7	37	32	23
25	3	20	34	38	03	04	25	24	0	7	40	43	24
26	4	3	45	13	03	17	29	18	0	7	43	53	25
27	4	16	55	48	04	00	33	12	0	7	47	04	26
28	5	0	6	23	04	13	37	06	0	7	50	14	27
29	5	13	16	58	04	26	41	00	0	7	53	25	28
30	5	26	27	33	05	09	44	54	0	7	56	36	29
31	6	9	38	8	05	22	48	48	0	7	59	46	30

JUNE.

Common Year.	Moon's Longitude				Moon's Anomaly.				Moon's Node.				*Bissextile.*
	S.	°	′	″	S.	°	′	″	S.	°	′	″	
1	6	22	48	43	6	5	52	40	0	8	2	56	0
2	7	5	59	18	6	18	56	34	0	8	6	7	1
3	7	19	9	53	7	2	0	28	0	8	9	18	2
4	8	2	20	28	7	15	4	22	0	8	12	29	3
5	8	15	31	3	7	28	8	16	0	8	15	39	4
6	8	28	41	38	8	11	12	10	0	8	18	50	5
7	9	11	52	13	8	24	16	4	0	8	22	0	6
8	9	25	2	48	9	7	19	58	0	8	25	11	7
9	10	8	13	23	9	20	23	52	0	8	28	22	8
10	10	21	23	58	10	3	27	46	0	8	31	32	9
11	11	4	34	33	10	16	31	40	0	8	34	43	10
12	11	17	45	8	10	29	35	34	0	8	37	54	11
13	0	0	55	43	11	12	39	28	0	8	41	5	12
14	0	14	6	18	11	25	43	22	0	8	44	16	13
15	0	27	16	53	0	8	47	16	0	8	47	26	14
16	1	10	27	28	0	21	51	10	0	8	50	37	15
17	1	23	38	3	1	4	55	4	0	8	53	47	16
18	2	6	48	38	1	17	58	58	0	[illegible]	56	58	17
19	2	19	59	13	2	1	2	52	0	[illegible]	0	9	18
20	3	3	9	48	2	14	6	46	0	9	3	19	19
21	3	16	20	23	3	27	10	40	0	9	6	30	20
22	3	29	30	58	3	10	14	34	0	9	9	40	21
23	4	12	41	33	4	23	18	28	0	9	12	51	22
24	4	25	52	8	4	6	22	22	0	9	16	2	23
25	5	9	2	43	4	19	26	15	0	9	19	12	24
26	5	22	13	18	5	2	30	9	0	9	22	23	25
27	6	5	23	53	5	15	34	3	0	9	25	34	26
28	6	18	34	28	5	28	37	57	0	9	28	45	27
29	7	1	45	4	6	11	41	51	0	9	31	53	28
30	7	14	55	39	6	24	45	45	0	9	35	6	29
	7	28	6	14	7	7	49	39	0	9	38	16	30

8

JULY.

Common Year.	Moon's Longitude				Moon's Anomaly				Moon's Node				Biſſextile.
	S.	°	′	″	S.	°	′	″	S.	°	′	″	
1	7	28	6	14	7	7	49	39	0	9	38	16	0
2	8	11	16	49	7	20	53	33	0	9	41	27	1
3	8	24	27	24	8	3	57	27	0	9	44	37	2
4	9	7	37	59	8	17	1	21	0	9	47	48	3
5	9	20	48	34	9	0	5	15	0	9	50	59	4
6	10	3	59	9	9	13	9	9	0	9	54	9	5
7	10	17	9	44	9	26	13	3	0	9	57	20	6
8	11	0	20	19	10	9	16	57	0	10	0	30	7
9	11	13	30	54	10	22	20	51	0	10	3	41	8
10	11	26	41	29	11	5	24	45	0	10	6	51	9
11	0	9	52	4	11	18	28	39	0	10	10	2	10
12	0	23	2	39	0	1	32	33	0	10	13	13	11
13	1	6	13	14	0	14	36	27	0	10	16	24	12
14	1	19	23	49	0	27	40	21	0	10	19	35	13
15	2	2	34	24	1	10	44	15	0	10	22	45	14
16	2	15	44	59	1	23	48	9	0	10	25	56	15
17	2	28	55	34	2	6	52	3	0	10	29	6	16
18	3	12	6	9	2	19	55	57	0	10	32	17	17
19	3	25	16	44	3	2	59	51	0	10	35	28	18
20	4	8	27	19	3	16	3	45	0	10	38	39	19
21	4	21	37	54	3	29	7	39	0	10	41	49	20
22	5	4	48	29	4	12	11	33	0	10	45	0	21
23	5	17	59	4	4	25	15	27	0	10	48	11	22
24	6	1	9	39	5	8	19	21	0	10	51	21	23
25	6	14	20	14	5	21	23	15	0	10	54	32	24
26	6	27	30	49	6	4	27	9	0	10	57	42	25
27	7	10	41	20	6	17	31	3	0	11	0	53	26
28	7	23	51	59	7	0	34	57	0	11	4	3	27
29	8	7	2	34	7	13	38	51	0	11	7	14	28
30	8	20	13	9	7	26	42	45	0	11	10	25	29
31	9	3	23	44	8	9	46	39	0	11	13	36	39

A U G U S T.

Common Year.	Moon's Longitude				Moon's Anomaly.				Moon's Node.				*Biſſextile.*
	S.	°	′	″	S.	°	′	″	S.	°	′	″	
1	9	16	34	19	8	22	50	33	0	11	16	47	0
2	9	29	44	54	9	5	54	27	0	11	19	58	1
3	10	12	55	29	9	18	58	20	0	11	23	8	2
4	10	26	6	4	10	2	2	14	0	11	26	19	3
5	11	9	16	39	10	15	6	8	0	11	29	29	4
6	11	22	27	14	10	28	10	2	0	11	32	40	5
7	0	5	37	49	11	11	15	56	0	11	35	51	6
8	0	18	48	24	11	24	19	50	0	11	39	2	7
9	1	1	58	59	0	7	23	44	0	11	42	12	8
10	1	15	9	34	0	20	25	37	0	11	45	23	9
11	1	28	20	9	1	3	29	31	0	11	48	33	10
12	2	11	30	44	1	16	33	25	0	11	51	44	11
13	2	24	41	19	1	29	37	19	0	11	54	54	12
14	3	7	51	54	2	12	41	13	0	11	58	5	13
15	3	21	2	29	2	25	45	7	0	12	1	15	14
16	4	4	13	4	3	8	49	0	0	12	4	26	15
17	4	17	23	40	3	21	52	54	0	12	7	36	16
18	5	0	34	15	4	4	56	48	0	12	10	47	17
19	5	13	44	50	4	18	0	42	0	12	13	58	18
20	5	26	55	25	5	1	4	36	0	12	17	8	19
21	6	10	6	0	5	14	8	30	0	12	20	19	20
22	6	23	16	35	5	27	12	24	0	12	23	29	21
23	7	6	27	10	6	10	16	18	0	12	26	40	22
24	7	19	37	45	6	23	20	12	0	12	29	51	23
25	8	2	48	20	7	6	24	7	0	12	33	1	24
26	8	15	58	55	7	19	28	0	0	12	36	12	25
27	8	29	9	30	8	2	31	54	0	12	39	23	26
28	9	12	20	5	8	15	35	48	0	12	42	34	27
29	9	25	30	40	8	28	39	42	0	12	45	44	28
30	10	8	41	15	9	11	43	36	0	12	48	55	29
31	10	21	51	50	9	24	47	30	0	12	52	5	30

SEPTEMBER.

Common Year.	Moon's Longitude				Moon's Anomaly				Moon's Node.				Biſſextile.
	S.	°	'	"	S.	°	'	"	S.	°	'	"	
1	11	5	2	25	10	7	51	24	0	12	55	16	0
2	11	18	33	0	10	20	55	18	0	12	58	27	1
3	0	1	23	35	11	3	59	12	0	13	1	37	2
4	0	14	34	10	11	17	3	6	0	13	4	48	3
5	0	27	44	45	0	0	7	0	0	13	7	58	4
6	1	10	55	20	0	13	10	54	0	13	11	9	5
7	1	24	5	55	0	26	14	48	0	13	14	20	6
8	2	7	16	30	1	9	18	42	0	13	17	31	7
9	2	20	27	5	1	22	22	36	0	13	20	41	8
10	3	3	37	40	2	5	26	30	0	13	23	52	9
11	3	16	48	15	2	18	30	24	0	13	27	3	10
12	3	29	58	50	3	1	34	18	0	13	30	14	11
13	4	13	9	25	3	14	38	12	0	13	33	24	12
14	4	26	20	0	3	27	42	6	0	13	36	35	13
15	5	9	30	35	4	10	46	0	0	13	39	45	14
16	5	22	41	10	4	23	49	54	0	13	42	56	15
17	6	5	51	45	5	6	53	48	0	13	46	7	16
18	6	19	2	20	5	19	57	42	0	13	49	17	17
19	7	2	12	55	6	3	1	36	0	13	52	28	18
20	7	15	53	30	6	16	5	30	0	13	55	38	19
21	7	28	34	5	6	29	9	24	0	13	58	49	20
22	8	11	44	40	7	12	13	18	0	14	2	0	21
23	8	24	55	15	7	25	17	12	0	14	5	10	22
24	9	8	5	50	8	8	21	6	0	14	8	21	23
25	9	21	16	25	8	21	24	58	0	14	11	31	24
26	10	4	27	0	9	4	28	52	0	14	14	42	25
27	10	17	37	35	9	17	32	46	0	14	17	53	26
28	11	0	48	10	10	0	36	40	0	14	21	3	27
29	11	13	58	45	10	13	40	34	0	14	24	14	28
30	11	27	9	20	10	26	44	28	0	14	27	24	29
~~31~~	~~10~~	~~10~~	~~19~~	~~55~~	~~11~~	~~9~~	~~48~~	~~22~~	~~0~~	~~14~~	~~30~~	~~35~~	~~30~~

OCTOBER.

Common Year.	Moon's Longitude				Moon's Anomaly.				Moon's Node.				*Biſſextile.*
	S.	°	'	"	S.	°	'	"	S.	°	'	"	
1	0	10	19	55	11	9	48	22	0	14	30	25	0
2	0	23	30	30	11	22	52	16	0	14	33	46	1
3	1	6	41	5	0	5	56	10	0	14	36	56	2
4	1	19	51	40	0	19	0	4	0	14	40	7	3
5	2	3	2	15	1	2	3	58	0	14	43	17	4
6	2	16	12	50	1	15	7	52	0	14	46	28	5
7	2	29	23	26	1	28	11	46	0	14	49	39	6
8	3	12	34	1	2	11	15	40	0	14	52	50	7
9	3	25	44	36	2	24	19	34	0	14	56	0	8
10	4	8	55	11	3	7	23	28	0	14	59	11	9
11	4	22	5	46	3	20	27	22	0	15	2	21	10
12	5	5	16	21	4	3	31	16	0	15	5	32	11
13	5	18	26	56	4	16	35	10	0	15	8	43	12
14	6	1	37	31	4	29	39	4	0	15	11	53	13
15	6	14	48	6	5	12	42	58	0	15	15	4	14
16	6	27	58	41	[illegible]	25	46	52	0	15	18	15	15
17	7	11	9	16	6	8	50	46	0	15	21	26	16
18	7	24	19	51	6	21	54	40	0	15	24	36	17
19	8	7	30	26	7	4	58	34	0	15	27	47	18
20	8	30	41	1	7	18	2	28	0	15	30	57	19
21	9	3	51	36	8	1	6	22	0	15	34	8	20
22	9	17	2	11	8	14	10	16	0	15	37	19	21
23	10	0	12	46	8	27	14	10	0	15	40	29	22
24	10	13	23	21	9	10	18	4	0	15	43	40	23
25	10	26	33	56	9	23	21	58	0	15	46	50	24
26	11	9	44	36	10	6	25	52	0	15	50	1	25
27	11	22	55	6	10	19	29	46	0	15	53	12	26
28	0	6	5	41	11	2	33	40	0	15	56	22	27
29	0	19	16	16	11	15	37	34	0	15	59	33	28
30	1	2	26	51	11	28	41	28	0	16	2	43	29
31	1	15	37	26	0	11	45	22	0	16	5	54	30

NOVEMBER.

Common Year.	Moon's Longitude				Moon's Anomaly.				Moon's Node.				Biſſextile.
	S.	°	′	″	S.	°	′	″	S.	°	′	″	
1	1	28	48	1	0	24	49	15	0	16	9	5	0
2	2	11	58	36	1	7	53	9	0	16	12	16	1
3	2	25	9	11	1	20	57	3	0	16	15	26	2
4	3	8	19	46	2	4	0	57	0	16	18	37	3
5	3	21	30	21	2	17	4	51	0	16	21	48	4
6	4	4	40	56	3	0	8	45	0	16	24	59	5
7	4	17	51	31	3	13	12	39	0	16	28	9	6
8	5	1	2	6	3	26	16	33	0	16	31	20	7
9	5	14	12	41	4	9	20	17	0	16	34	30	8
10	5	27	23	16	4	22	24	21	0	16	37	41	9
11	6	10	33	51	5	5	28	15	0	16	40	52	10
12	6	23	44	26	5	18	32	9	0	16	44	2	11
13	7	6	55	1	6	1	36	3	0	16	47	13	12
14	7	20	5	36	6	14	39	57	0	16	50	23	13
15	8	3	16	11	6	27	43	51	0	16	53	34	14
16	8	16	26	46	7	10	47	45	0	16	56	45	15
17	8	29	37	21	7	23	51	39	0	16	59	55	16
18	9	12	47	56	8	6	55	33	0	17	3	6	17
19	9	25	58	31	8	19	59	27	0	17	6	16	18
20	10	9	9	6	9	3	3	21	0	17	9	27	19
21	10	22	19	41	9	16	7	15	0	17	12	38	20
22	11	5	30	16	9	29	11	9	0	17	15	49	21
23	11	18	40	51	10	12	15	3	0	17	18	59	22
24	0	1	51	26	10	25	18	57	0	17	22	10	23
25	0	15	2	2	11	8	22	51	0	17	25	21	24
26	0	28	12	37	11	21	26	45	0	17	28	32	25
27	1	11	23	12	0	4	30	39	0	17	31	42	26
28	1	24	33	47	0	17	34	33	0	17	34	53	27
29	2	7	44	22	1	0	38	27	0	17	38	3	28
30	2	20	55	57	1	13	42	21	0	17	41	14	29
31	3	4	5	32	1	26	46	15	0	17	44	25	30

DECEMBER.

Common Year.	Moon's Longitude				Moon's Anomaly.				Moon's Node.				Bissextile.
	S.	°	′	″	S.	°	′	″	S.	°	′	″	
1	3	4	5	32	1	26	46	15	0	17	44	25	0
2	3	17	16	37	2	9	50	9	0	17	47	35	1
3	4	0	26	42	2	22	54	3	0	17	50	46	2
4	4	13	37	17	3	5	57	57	0	17	53	56	3
5	4	26	47	52	3	19	1	51	0	17	57	7	4
6	5	9	58	27	4	2	5	45	0	18	0	18	5
7	5	23	9	2	4	15	9	39	0	18	3	28	6
8	6	6	19	37	4	28	13	33	0	18	6	39	7
9	6	19	30	12	5	11	17	27	0	18	9	46	8
10	7	2	40	47	5	24	21	21	0	18	13	0	9
11	7	15	51	22	6	7	25	15	0	18	16	11	10
12	7	29	1	57	6	20	29	9	0	18	19	21	11
13	8	12	12	32	7	3	33	3	0	18	22	32	12
14	8	25	23	7	7	16	36	57	0	18	25	42	13
15	9	8	33	42	7	29	40	51	0	18	28	53	14
16	9	21	44	17	8	12	44	45	0	18	32	4	15
17	10	4	54	52	8	25	48	39	0	18	35	15	16
18	10	18	5	27	9	8	52	33	0	18	38	25	17
19	11	1	16	2	9	21	56	27	0	18	41	36	18
20	11	14	26	37	10	5	0	21	0	18	44	47	19
11	11	27	37	12	10	18	4	15	0	18	47	58	20
22	0	10	47	47	11	1	8	9	0	18	51	9	21
23	0	23	58	22	11	14	12	3	0	18	54	19	22
24	1	7	8	57	11	27	15	57	0	18	57	30	23
25	1	20	19	32	0	10	19	51	0	19	0	41	24
26	2	3	30	7	0	23	23	45	0	19	3	51	25
27	2	16	40	42	1	6	27	39	0	19	7	2	26
28	2	29	51	17	1	19	31	33	0	19	10	12	27
29	3	13	1	52	2	2	35	27	0	19	13	23	28
30	3	26	12	27	2	15	39	21	0	19	16	34	29
31	4	9	23	3	2	28	43	13	0	19	19	43	30

	Moon's Longitude.			Moon's Anomaly.			Moon's Node.	
H.	°	′	″	°	′	″	′	″
′	′	″	‴	′	″	‴	″	‴
″	″	‴	⁗	″	‴	⁗	‴	⁗
1	0	32	56	0	32	39	0	8
2	1	5	53	1	5	20	0	16
3	1	38	49	1	37	59	0	24
4	2	11	46	2	10	39	0	32
5	2	44	42	2	43	18	0	40
6	3	17	39	3	15	59	0	48
7	3	50	35	3	48	38	0	56
8	4	23	32	4	21	18	1	4
9	4	56	28	4	53	58	1	12
10	5	29	25	5	26	38	1	19
11	6	2	21	5	59	17	1	27
12	6	35	18	6	31	57	1	35
13	7	8	14	7	4	47	1	43
14	7	41	10	7	37	16	1	51
15	8	14	7	8	9	56	1	59
16	8	47	3	8	42	36	2	7
17	9	20	0	9	15	16	2	15
18	9	52	56	9	47	55	2	23
19	10	25	53	10	20	35	2	31
20	10	58	49	10	53	15	2	39
21	11	31	46	11	25	55	2	47
22	12	4	42	11	58	34	2	55
23	12	37	39	12	31	15	3	3
24	13	10	35	13	3	54	3	11
25	13	43	32	13	36	34	3	19
26	14	16	28	14	9	13	3	27
27	14	49	25	14	41	54	3	34
28	15	22	21	15	14	33	3	42
29	15	55	17	15	47	12	3	50
30	16	28	14	16	19	15	3	58

	Moon's Longitude.			Moon's Anomaly.			Moon's Node.	
H.	°	'	''	°	'	''	'	''
'	'	''	'''	'	''	'''	''	'''
''	''	'''	''''	''	'''	''''	'''	''''
31	17	1	10	16	52	32	4	6
32	17	34	27	17	25	13	4	14
33	18	7	23	17	57	52	4	22
34	18	39	59	18	30	31	4	30
35	19	12	55	19	3	11	4	38
36	19	45	52	19	35	50	4	46
37	20	18	48	20	8	29	4	54
38	20	51	45	20	41	9	5	2
39	21	24	41	21	13	59	5	10
40	21	57	38	21	46	30	5	18
41	22	30	54	22	19	9	5	26
42	23	3	31	22	51	49	5	34
43	23	36	27	23	24	28	5	42
44	24	9	24	23	57	8	5	50
45	24	42	20	24	29	48	5	58
46	25	15	17	25	2	29	6	6
47	25	48	13	25	35	6	6	14
48	26	21	10	26	7	48	6	22
49	26	54	6	26	40	27	6	30
50	27	27	3	27	13	7	6	38
51	27	59	59	27	45	46	6	46
52	28	32	56	28	18	26	6	54
53	29	5	52	28	51	6	7	1
54	29	38	49	29	23	47	7	8
55	30	11	45	29	56	26	7	16
56	30	44	42	30	29	6	7	24
57	31	17	38	31	1	45	7	32
58	31	50	34	31	34	24	7	40
59	32	23	31	32	7	5	7	48
60	32	56	27	32	39	44	7	56

Moon's Ano	Sign 0 ſubtract.				Sign 1 ſubtract.				*Moon's Ano*
	Equation.			*Logar. Moon ab Earth.*	*Equation.*			*Logar. Moon ab Earth*	
	°	'	''		°	'	''		
0	0	0	0	5.029668	2	38	43	5.026200	30
1	0	5	36	5.029664	2	43	25	5.025968	29
2	0	11	11	5.029653	2	48	4	5.025728	28
3	0	16	46	5.029633	2	52	41	5.025482	27
4	0	22	21	5.029606	2	57	14	5.025228	26
5	0	27	46	5.029571	2	59	55	5.024967	25
6	0	33	30	5.029528	3	6	0	5.024699	24
7	0	38	43	5.029477	3	10	16	5.024424	23
8	0	43	56	5.029419	3	14	30	5.024142	22
9	0	50	8	5.029353	3	18	40	5.023853	21
10	0	55	20	5.029279	3	22	45	5.023557	20
11	0	59	30	5.029197	3	26	48	5.023254	19
12	1	6	39	5.029108	3	30	45	5.022944	18
13	1	11	47	5.029012	3	34	38	5.022628	17
14	1	16	54	5.028907	3	38	27	5.022304	16
15	1	22	50	5.028794	3	42	13	5.021974	15
16	1	28	14	5.028674	3	45	44	5.021638	14
17	1	33	27	5.028547	3	49	12	5.021294	13
18	1	38	48	5.028411	3	52	36	5.020945	12
19	1	44	7	5.028268	3	56	5	5.020590	11
20	1	49	5	5.028118	3	59	21	5.020228	10
21	1	54	20	5.027960	4	2	32	5.019860	9
22	1	59	34	5.027794	4	5	39	5.019485	8
23	2	4	16	5.027621	4	8	51	5.019105	7
24	2	9	35	5.027440	4	11	49	5.018718	6
25	2	14	43	5.027252	4	14	33	5.018326	5
26	2	19	38	5.027057	4	17	2	5.017928	4
27	2	24	50	5.026854	4	19	57	5.017523	3
28	2	29	30	5.026643	4	22	47	5.017113	2
29	2	34	8	5.026425	4	25	32	5.016698	1
30	2	38	43	5.026200	4	27	14	5.016277	0
	Sign 11 add.				Sign 10 add.				

Moon's Ano.	Sign 2 ſubtract.				Sign 3 ſubtract.				*Moon's Ano.*
	Equation.			*Logar. Moon ab Earth.*	*Equation.*			*Logar. Moon ab Earth.*	
	°	′	″		°	′	″		
0	4	27	13	5.016277	4	57	43	5.001610	30
1	4	29	49	5.015851	4	57	21	5.001074	29
2	4	32	20	5.015419	4	56	32	5.000537	28
3	4	34	46	5.014982	4	56	18	4.999998	27
4	4	36	7	5.014540	4	55	29	4.999458	26
5	4	38	23	5.014093	4	54	34	4.998917	25
6	4	40	35	5.013640	4	53	54	4.998375	24
7	4	41	59	5.013183	4	52	48	4.997832	23
8	4	43	42	5.012722	4	51	47	4.997290	22
9	4	45	38	5.012255	4	50	40	4.996747	21
10	4	47	2	5.011784	4	49	28	4.996203	20
11	4	48	15	5.011309	4	48	10	4.995659	19
12	4	49	50	5.010838	4	46	37	4.995117	18
13	4	51	3	5.010346	4	45	18	4.994575	17
14	4	52	10	5.009858	4	43	44	4 994033	16
15	4	53	15	5.009367	4	42	5	4.993492	15
16	4	54	14	5.008871	4	40	20	4.992952	14
17	4	55	5	5.008371	4	38	30	4.992412	13
18	4	55	47	5.007869	4	36	45	4.991874	12
19	4	56	30	5.007363	4	34	45	4.991337	11
20	4	57	8	5.006853	4	32	39	4.990803	10
21	4	57	36	5 006341	4	30	38	4.990270	9
22	4	57	57	5.005826	4	28	22	4.989739	8
23	4	58	18	5.005307	4	26	11	4.989211	7
24	4	58	34	5.004786	4	23	45	4.988685	6
25	4	58	34	5.004262	4	21	23	4.988162	5
26	4	58	29	5.003736	4	18	57	4.987641	4
27	4	58	18	5.003207	4	16	26	4.987124	3
28	4	58	2	5.002677	4	13	40	4.986610	2
29	4	57	41	5.002144	4	11	9	4.986099	1
30	4	57	33	5.001610	4	8	13	4.985591	0
	Sign 9 add.				Sign 8 add.				

Moon's Ano.	Sign 4 ſubtract.				Sign 5 ſubtract.				Moon's Ano.
	Equation.			*Logar. Moon ab Earth.*	*Equation.*			*Logar. Moon ab Earth.*	
	°	′	″		°	′	″		
0	4	8	13	4.985591	2	19	23	4.972970	30
1	4	5	32	4.985088	2	15	8	4.972665	29
2	4	2	47	4.984588	2	10	40	4.972368	28
3	3	59	47	4.984093	2	6	20	4.972081	27
4	3	56	42	4.983602	2	1	58	4.971802	26
5	3	53	33	4.983116	1	57	23	4.971534	25
6	3	50	29	4.982634	1	53	5	4.971274	24
7	3	47	11	4.982158	1	48	36	4.971025	23
8	3	44	9	4.981686	1	43	54	4.970785	22
9	3	40	42	4.981220	1	39	30	4.970555	21
10	3	37	11	4.980759	1	34	52	4.970335	20
11	3	33	35	4.980304	1	30	17	4.970126	19
12	3	30	26	4.979856	1	25	38	4.969927	18
13	3	26	42	4.979412	1	20	57	4.969738	17
14	3	23	14	4.978975	1	16	14	4.969559	16
15	3	19	33	4.978545	1	11	30	4.969391	15
16	3	15	47	4.978120	1	6	54	4.969232	14
17	3	12	18	4.977703	1	2	17	4.969085	13
18	3	8	25	4.977293	0	57	39	4.968944	12
19	3	4	38	4.976890	0	52	40	4.968822	11
20	3	0	48	4.976494	0	48	0	4.968706	10
21	2	56	44	4.976106	0	43	8	4.968602	9
22	2	52	37	4.975724	0	38	26	4.968509	8
23	2	48	36	4.975351	0	33	43	4.968427	7
24	2	44	42	4.974929	0	28	50	4.968355	6
25	2	40	25	4.974629	0	24	6	4.968294	5
26	2	36	34	4.974280	0	19	16	4.968244	4
27	2	32	14	4.973939	0	14	26	4.968206	3
28	2	28	4	4.973607	0	9	37	4.968179	2
29	2	23	45	4.973284	0	4	46	4.968162	1
30	2	19	23	4.972970	0	0	0	4.968156	0
	Sign 7 add.				Sign 6 add.				

A TAALE *of the Moon's* Reflection, *and Logarithm of the* Chord of Evection. *The Logarithm of the Diameter of the Circle of Evection is* 3.640432.

Degrees.	Signs } 0 add 6 ſubt.			Signs } 1 add 7 ſubt.			Degrees.
	Reflect.		*Logarithm Chord of Evection*	*Reflect.*		*Logarithm Chord of Evection.*	
	′	″		′	″		
0	0	0	0.000000	18	47	3.339402	30
1	0	39	1.882287	19	20	3.352271	29
2	1	18	2.183251	19	54	3.364642	28
3	1	57	2.359232	20	27	3.387994	27
4	2	37	2.484017	21	0	3.393560	26
5	3	16	2.580728	21	52	3.399023	25
6	3	56	2.699667	22	4	3.409651	24
7	4	35	2.726326	22	36	3.419895	23
8	5	14	2.783987	23	7	3.429774	22
9	5	53	2.834764	23	38	3.439304	21
10	6	31	2.880102	24	8	3.448499	20
11	7	10	2.921031	24	38	3.457375	19
12	7	48	2.958311	25	8	3.465943	18
13	8	27	2.992520	25	37	3.474215	17
14	9	5	3.024107	26	5	3.482203	16
15	9	43	3.053428	26	33	3.489917	15
16	10	21	3.080770	27	1	3.497366	14
17	10	59	3.106367	27	28	3.504559	13
18	11	36	3.130414	27	54	3.511505	12
19	12	14	3.153074	28	21	3.518212	11
20	12	51	3.174484	28	46	3.524686	10
21	13	27	3.194761	29	11	3.530935	9
22	14	4	3.214007	29	36	3.536964	8
23	14	40	3.232310	30	0	3.542781	7
24	15	16	3.249745	30	23	3.548390	6
25	15	52	3.266380	30	46	3.553797	5
26	16	28	3.282274	31	8	3.559056	4
27	17	3	3.297479	31	30	3.564023	3
28	17	38	3.312041	31	51	3.568852	2
29	18	12	3.326003	32	11	3.573498	1
30	18	47	3.339402	32	31	3.577963	0
	Sign } 5 add 11 ſub.			Sign } 4 add 10 ſub.			

Sign } 2 add
8 ſub.

Degrees.	*Reflection.* ′	″	*Logarithm Chord of Evection.*	Degrees.
0	32	31	3.577963	30
1	32	51	3.582251	29
2	33	9	3.586367	28
3	33	28	3.590313	27
4	33	45	3.594092	26
5	34	2	3.597708	25
6	34	18	3.601162	24
7	34	34	3.604458	23
8	34	49	3.607498	22
9	35	4	3.610584	21
10	35	17	3.613418	20
11	35	30	3.616102	19
12	35	43	3.618638	18
13	35	55	3.621028	17
14	36	6	3.623274	16
15	36	16	3.625376	15
16	36	26	3.627336	14
17	36	25	3.629156	13
18	36	44	3.630836	12
19	36	52	3.632369	11
20	36	59	3.633783	10
21	37	6	3.635052	9
22	37	11	3.636185	8
23	37	16	3.637183	7
24	37	21	3.638046	6
25	37	25	3.638776	5
26	37	28	3.639373	4
27	37	30	3.639836	3
28	37	32	3.640167	2
29	37	33	3.640366	1
30	37	33	3.640432	0

Sign } 3 add
9 ſub.

A Table of the Equation of the Moon's Nodes.

Doub. Diſt. of Moon from Sun.	Sign } 0 ſub 6 add			Sign } 1 ſub. 7 add			Sign } 2 ſub. 8 add			Doub. Diſt. of Moon from Sun.
	°	′	″	°	′	″	°	′	″	
0	0	0	0	0	52	30	1	30	56	30
1	0	1	50	0	54	4	1	31	50	29
2	0	3	40	0	55	38	1	32	42	28
3	0	5	30	0	57	11	1	33	33	27
4	0	7	19	0	58	43	1	34	22	26
5	0	9	9	1	0	13	1	35	10	25
6	0	10	58	1	2	43	1	35	55	24
7	0	12	48	1	3	11	1	36	39	23
8	0	14	37	1	4	38	1	37	21	22
9	0	16	25	1	6	4	1	38	1	21
10	0	18	14	1	7	29	1	38	40	20
11	0	20	2	1	8	53	1	39	17	19
12	0	21	50	1	10	15	1	39	52	18
13	0	23	37	1	11	36	1	40	25	17
14	0	25	24	1	12	56	1	40	56	16
15	0	27	10	1	14	15	1	41	25	15
16	0	28	56	1	15	31	1	41	53	14
17	0	30	42	1	16	47	1	42	18	13
18	0	32	27	1	18	2	1	42	42	12
19	0	34	11	1	19	14	1	43	4	11
20	0	35	54	1	20	26	1	43	24	10
21	0	37	37	1	21	36	1	43	42	9
22	0	39	20	1	22	44	1	43	59	8
23	0	41	1	1	23	51	1	44	13	7
24	0	42	42	1	24	57	1	44	26	6
25	0	44	22	1	26	0	1	44	38	5
26	0	46	1	1	27	3	1	44	45	4
27	0	47	40	1	28	3	1	44	51	3
28	0	49	17	1	29	2	1	44	56	2
29	0	50	54	1	30	0	1	44	59	1
30	0	52	30	1	30	56	1	45	0	0
	Sign } 5 ſub. 11 add			Sign } 4 ſub. 10 add			Sign } 3 ſub, 9 add.			

Moon's Dist. from Sun.	*Signs.* 0 6		*Signs.* 1 7		*Signs.* 2 8		*Moon's Dist. from Sun.*
	′	″	′	″	′	″	
0	0	0	3	56	13	12	30
1	0	0	4	12	13	27	29
2	0	1	4	29	13	43	28
3	0	2	4	47	14	0	27
4	0	3	5	7	14	15	26
5	0	4	5	26	14	30	25
6	0	6	5	46	14	45	24
7	0	10	6	6	15	0	23
8	0	16	6	27	15	12	22
9	0	22	6	49	15	24	21
10	0	28	7	12	15	36	20
11	0	34	7	36	15	48	19
12	0	40	7	59	15	59	18
13	0	46	8	24	16	9	17
14	0	52	8	44	16	19	16
15	0	57	9	4	16	27	15
16	1	2	9	23	16	36	14
17	1	8	9	42	16	45	13
18	1	15	9	59	16	53	12
19	1	25	10	17	16	59	11
20	1	37	10	35	17	5	10
21	1	49	10	52	17	10	9
22	2	4	11	9	17	14	8
23	2	17	11	24	17	15	7
24	2	30	11	40	17	16	6
25	2	43	11	58	17	17	5
26	2	56	12	13	17	18	4
27	3	10	12	28	17	19	3
28	3	25	12	43	17	20	2
29	3	41	12	59	17	20	1
30	3	56	13	12	17	20	0
	Signs 5 11		*Signs* 4 10		*Signs* 3 9		

A Table *of the Moon's Latitude, with her Reduction from her Orbit to the Ecliptick in the* Syzygias.

Arg. Latit.	*Moon's Lat.* *Signs* } 0 N. 6 S.			*Reduc.* *Subt.*		*Moon's Lat.* *Signs* } 1 N. 7 S.			*Reduc.* *Subt.*		Arg. Latit.
	°	′	″	′	″	°	′	″	′	″	
0	0	0	0	0	0	2	29	51	5	40	30
1	0	5	14	0	14	2	34	22	5	47	29
2	0	10	27	0	27	2	38	50	5	53	28
3	0	15	41	0	41	2	43	15	5	59	27
4	0	20	54	0	55	2	47	37	6	4	26
5	0	26	7	1	8	2	51	56	6	9	25
6	0	31	19	1	22	2	56	11	6	14	24
7	0	36	31	1	35	3	0	24	6	18	23
8	0	41	42	1	48	3	4	33	6	21	22
9	0	46	52	2	1	3	8	39	6	24	21
10	0	52	2	2	14	3	12	42	6	27	20
11	0	57	10	2	27	3	16	41	6	29	19
12	1	2	18	2	40	3	20	56	6	31	18
13	1	7	24	2	52	3	24	28	6	32	17
14	1	12	29	3	4	3	28	16	6	33	16
15	1	17	33	3	16	3	32	0	6	33	15
16	1	22	36	3	28	3	35	40	6	33	14
17	1	27	37	3	40	3	39	17	6	32	13
18	1	32	36	3	51	3	42	49	6	31	12
19	1	37	34	4	2	3	46	17	6	29	11
20	1	42	29	4	12	3	49	42	6	27	10
21	1	47	23	4	23	3	53	2	6	25	9
22	1	52	16	4	33	3	56	17	6	22	8
23	1	57	6	4	43	3	59	29	6	18	7
24	2	1	54	4	52	4	2	36	6	14	6
25	2	6	39	5	1	4	5	39	6	10	5
26	2	11	23	5	9	4	8	37	6	5	4
27	2	16	4	5	18	4	11	30	6	0	3
28	2	20	42	5	26	4	14	19	5	54	2
29	2	25	18	5	33	4	17	4	5	47	1
30	2	29	51	5	40	4	19	44	5	41	0
	Signs } 5 N. 11 S.			Add.		*Signs* } 4 N 10 S			Add.		

Arg. Latit.	Moon's Lat. Signs } 2 N. 8 S.			Reduc. Subt.		Arg. Latit.
	°	'	"	'	"	
0	4	19	44	5	41	30
1	4	22	18	5	34	29
2	4	24	49	5	26	28
3	4	27	14	5	18	27
4	4	29	34	5	10	26
5	4	31	50	5	2	25
6	4	34	0	4	53	24
7	4	36	6	4	43	23
8	4	38	6	4	34	22
9	4	40	2	4	23	21
10	4	41	52	4	13	20
11	4	43	37	4	2	19
12	4	45	17	3	51	18
13	4	46	52	3	40	17
14	4	48	21	3	29	16
15	4	49	45	3	17	15
16	4	51	4	3	5	14
17	4	52	18	2	53	13
18	4	53	26	2	40	12
19	4	54	28	2	28	11
20	4	55	26	2	15	10
21	4	56	18	2	2	9
22	4	57	4	1	49	8
23	4	57	45	1	35	7
24	4	58	21	1	22	6
25	4	58	51	1	8	5
26	4	59	16	0	55	4
27	4	59	35	0	41	3
28	4	59	49	0	27	2
29	4	59	57	0	14	1
30	5	00	00	0	0	0
	Signs } 3 North. 9 South.			Add.		

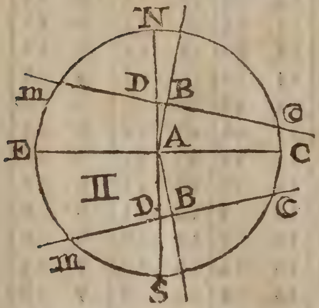
A TABLE *of the Diſtance, or Motion of the Moon from the True Conjunction to the Greateſt Obſcuration.*

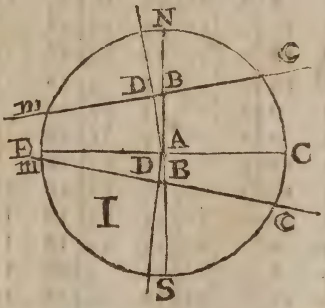
The Viſible Latitude of the Moon.		Moon's Diſt. from Conjunction.	
°	′	′	″
0	1	0	5
0	2	0	10
0	3	0	15
0	4	0	20
0	5	0	25
0	10	0	51
0	15	1	17
0	20	1	43
0	25	2	9
0	30	2	34
0	35	3	0
0	40	3	25
0	45	3	50
0	50	4	15
0	55	4	41
1	0	5	7
1	5	5	32
1	10	5	57
1	15	6	24
1	20	6	49
1	25	7	14
1	30	7	39
1	35	8	4
1	40	8	30
1	45	8	55

North
South } Aſcending ſub.

North
South } Deſcending add.

IN the two adjacent Schemes E C repreſents the Ecliptic, N S its Axis *m*, ☽ the Moon's Viſible Orb. In the Firſt Scheme the Viſible Latitude is deſcending; therefore the Middle of the Eclipſe at D happens after the true Ecliptic Conjunction B: So the Diſtance or Motion B D muſt be divided by the Viſible Hourly Motion ☽ à ☉, following the Viſible Conjunction. But in Scheme 2, the Viſible Latitude is aſcending, in which the greateſt Obſcuration happens before the true Ecliptic Conjunction. In this caſe you muſt divide the Diſtance D B by the Viſible Hourly Motion of the Moon from the Sun; and the Quotient ſubtracted from the Time of the Viſible Conjunction, leaves the Middle or Greateſt Obſcuration of the Sun's Eclipſe: And in the firſt Caſe, the Quotient added, gives the ſame thing. A F is the Axis of the Moon's Viſible Way; A D the Moon's Viſible Latitude at the Middle of the Sun's Eclipſe, in the Firſt Scheme, and A B in the Second.





A TA-

A TABLE *of the Hourly Motions, Semidiameters, and Horizontal Parallaxes of the Sun and Moon.*

Mean Anom. of Sun and Moon.		*Hourly Mot. of the Sun.*		*Hourly Motion of the Moon in the Syzygia*		*Semidiameter of the Sun.*		*Semidiameter of the Moon.*		*Horizontal Parallax of the* ☽.		*Mean Anom. of Sun and Moon.*	
S.	°	′	″	′	″	′	″	′	″	′	″	S.	°
0	0	2	23	29	33	15	49	14	54	54	59	12	0
0	6	2	23	29	34	15	49	14	55	54	59	11	24
0	12	2	23	29	37	15	49	14	56	55	2	11	18
0	18	2	23	29	43	15	49	14	57	55	7	11	12
0	24	2	23	29	51	15	50	14	58	55	13	11	6
1	0	2	24	30	3	15	51	15	1	55	20	11	0
1	6	2	24	30	17	15	52	15	3	55	29	10	24
1	12	2	24	30	31	15	53	15	6	25	40	10	18
1	18	2	24	30	47	15	54	15	9	55	52	10	12
1	24	2	25	31	6	15	55	15	12	56	5	10	6
2	0	2	25	31	27	15	57	15	17	56	20	10	0
2	6	2	26	31	50	15	58	15	22	56	37	9	24
2	12	2	26	32	14	16	0	15	25	56	53	9	18
2	18	2	27	32	39	16	1	15	30	57	12	9	12
2	24	2	27	33	4	16	3	15	36	57	30	9	6
3	0	2	28	33	29	16	5	15	41	57	50	9	0
3	6	2	28	33	55	16	6	15	46	58	10	8	24
3	12	2	29	34	22	16	8	15	52	58	31	8	18
3	18	2	29	34	50	16	10	15	58	58	52	8	12
3	24	2	30	35	17	16	12	16	3	59	11	8	6
4	0	2	30	35	42	16	13	16	9	59	30	8	0
4	6	2	31	36	5	16	15	16	14	59	50	7	24
4	12	2	31	36	26	16	16	16	19	60	9	7	18
4	18	2	32	36	46	16	17	16	24	60	26	7	12
4	24	2	32	37	5	16	18	16	28	60	40	7	6
5	0	2	32	37	23	16	19	16	31	60	53	7	0
5	6	2	33	37	38	16	20	16	34	61	4	6	24
5	12	2	33	37	51	16	21	16	36	61	12	6	18
5	18	2	33	38	0	16	21	16	38	61	19	6	12
5	24	2	33	38	5	16	22	16	39	61	23	6	6
6	0	2	33	38	6	16	22	16	40	61	24	6	0

Altit.		*Refract.*		*Altit.*	*Par. Sun*
°	'	'	"	°	"
0	0	33	00	0	10
0	30	26	38	3	10
1	0	23	22	6	10
1	30	20	17	9	10
2	0	17	26	12	9
2	30	15	15	15	9
3	0	13	23	18	9
3	30	11	53	21	9
4	0	10	39	24	8
4	30	9	38	27	8
5	0	8	48	30	8
6	0	7	26	33	7
7	0	6	25	36	7
8	0	5	27	39	7
9	0	5	2	42	6
10	0	4	33	45	6
11	0	4	6	48	6
12	0	3	45	51	5
13	0	3	29	54	5
14	0	3	13	57	5
15	0	3	0	60	4
16	0	2	48	63	4
17	0	2	38	66	4
18	0	2	29	69	3
19	0	2	21	72	3
20	0	2	14	75	2
21	0	2	7	78	2
22	0	2	1	81	1
23	0	1	55	84	1
24	0	1	50	87	0

Altit. °	′	*Refract.* ′	″
25	0	1	45
26	0	1	40
27	0	1	36
28	0	1	31
29	0	1	27
30	0	1	23
31	0	1	20
32	0	1	17
33	0	1	14
34	0	1	11
35	0	1	9
36	0	1	7
37	0	1	5
38	0	1	2
39	0	1	0
40	0	0	58
41	0	0	56
42	0	0	54
43	0	0	52
44	0	0	50
45	0	0	48
46	0	0	46
47	0	0	45
48	0	0	44
49	0	0	42
50	0	0	40
55	0	0	34
60	0	0	29
70	0	0	19
80	0	0	9
90	0	0	0

Altit. °	*Par. Sun* ″
90	0

Note, The Moon's Semidiameter is at all times to her Horizontal Parallax as 16′ 16″ to 60′.

Time.	Motion.			Time.	Motion.		
H.	°	′	″	H.	°	′	″
′	′	″	‴	′	′	″	‴
″	″	‴	⁗	″	″	‴	⁗
1	0	30	29	31	15	44	47
2	1	0	57	32	16	15	16
3	1	31	26	33	16	45	45
4	2	1	54	34	17	16	13
5	2	32	23	35	17	46	42
6	3	2	52	36	18	17	10
7	3	33	20	37	18	47	39
8	4	3	49	38	19	18	7
9	4	34	18	39	19	48	36
10	5	4	46	40	20	19	5
11	5	35	15	41	20	49	33
12	6	5	43	42	21	20	2
13	6	36	12	43	21	50	31
14	7	6	41	44	22	20	59
15	7	37	9	45	22	51	28
16	8	7	38	46	23	21	56
17	8	38	6	47	23	52	25
18	9	8	35	48	24	22	54
19	9	39	4	49	24	53	22
20	10	9	32	50	25	23	51
21	10	40	1	51	25	54	19
22	11	10	30	52	26	24	48
23	11	40	58	53	26	55	17
24	12	11	27	54	27	25	45
25	12	41	55	55	27	56	14
26	13	12	24	56	28	26	43
27	13	42	53	57	28	57	11
28	14	13	21	58	29	27	40
29	14	43	50	59	29	58	8
30	15	14	19	60	30	28	37

A TABLE *for converting Hours and Minutes of Time into Degrees,* & contra.

Time	Motion.	Time	Motion.		Time	Motion.	
H.	°	′	°	′	′	°	′
′	′	″	′	″	″	′	″
″	″	‴	″	‴	‴	″	‴
1	15	1	0	15	31	7	45
2	30	2	0	30	32	8	0
3	45	3	0	45	33	8	15
4	60	4	1	0	34	8	30
5	75	5	1	15	35	8	45
6	90	6	1	30	36	9	0
7	105	7	1	45	37	9	15
8	120	8	2	0	38	9	30
9	135	9	2	15	39	9	45
10	150	10	2	30	40	10	0
11	165	11	2	45	41	10	15
12	180	12	3	0	42	10	30
13	195	13	3	15	43	10	45
14	210	14	3	30	44	11	0
15	225	15	3	45	45	11	15
16	240	16	4	0	46	11	30
17	255	17	4	15	47	11	45
18	270	18	4	30	48	12	0
19	285	19	4	45	49	12	15
20	300	20	5	0	50	12	30
21	315	21	5	15	51	12	45
22	330	22	5	30	52	13	0
23	345	23	5	45	53	13	15
24	360	24	6	0	54	13	30
25		25	6	15	55	13	45
26		26	6	30	56	14	0
27		27	6	45	57	14	15
28		28	7	0	58	14	30
29		29	7	15	59	14	45
30		30	7	30	60	15	0

A TABLE *ſhewing the Lunar Aſpects by Inſpection, by help of the Diurnal Motion, and Diſtance at Noon, of the Moon and Planet.*

	Diurnal Motion of the Moon from the Planet.							
Diſt.at Noon.	° 11	' 15	' 30	' 45	° 12	' 15	' 30	' 45
° '	h. '	h. '	h. '	h. '	h. '	h. '	h. '	h. '
5	0 11	0 11	0 10	0 10	0 10	0 10	0 10	0 09
10	0 22	0 21	0 20	0 20	0 20	0 20	0 20	0 19
15	0 33	0 33	0 29	0 30	0 30	0 30	0 30	0 29
20	0 44	0 43	0 42	0 41	0 40	0 39	0 39	0 38
40	1 38	1 26	1 18	1 22	1 20	1 18	1 17	1 15
1 0	2 12	2 08	2 5	2 03	2 00	1 57	1 55	1 50
20	3 3	2 51	2 55	2 47	2 40	2 36	2 34	2 27
40	3 40	3 34	3 30	3 25	3 20	3 15	3 12	3 05
2 0	4 24	4 17	4 11	4 06	4 00	3 54	3 51	3 43
20	5 8	5 00	4 53	4 47	4 40	4 33	4 29	4 21
40	5 52	5 43	5 38	5 28	5 20	5 12	5 10	4 59
3 0	6 36	6 25	6 16	6 08	6 00	5 51	5 46	5 37
20	7 20	7 08	7 00	6 49	6 40	6 30	6 25	6 14
40	8 4	7 50	7 43	7 30	7 20	7 09	7 03	6 52
4 0	8 48	8 33	8 21	8 11	8 00	7 48	7 41	7 30
20	9 32	9 16	9 3	8 52	8 40	8 27	8 21	8 08
40	10 16	9 59	9 44	9 32	9 20	9 06	9 00	8 46
5 0	11 00	10 42	10 26	10 13	10 00	9 45	9 36	9 24
20	11 39	11 24	11 08	10 54	10 40	10 24	10 15	10 02
40	12 23	12 07	11 50	11 35	11 20	11 03	10 48	10 40
6 0	13 07	12 50	12 32	12 15	12 00	11 42	11 31	11 18

The TABLE (Continu'd,) *ſhewing the Lunar Aſpects by Inſpection, by help of the Diurnal Motion, and Diſtance at Noon of the Moon and Planet.*

		Diurnal Motion of the Moon from the Planet.							
Diſt.at Noon.		° 11	' 15	' 30	' 45	° 12	' 15	' 30	' 45
°	'	h. '	h. '	h. '	h. '	h. '	h. '	h. '	h. '
6	20	13 51	13 32	13 14	12 56	12 40	12 24	12 10	11 56
	40	14 35	14 15	13 56	13 37	13 20	13 04	12 48	12 34
7	00	15 18	14 58	14 38	14 18	14 00	13 43	13 00	13 05
	20	16 02	15 41	15 20	14 59	14 40	14 22	14 02	13 50
	40	16 46	16 23	16 02	15 40	15 20	15 01	14 59	14 28
8	00	17 30	17 06	16 44	16 20	16 00	15 40	15 38	15 06
	20	18 13	17 49	17 25	17 01	16 40	16 23	16 07	15 44
	40	18 57	18 31	18 07	17 42	17 20	16 58	16 42	16 22
9	00	19 41	19 14	18 47	18 23	18 00	17 37	17 18	16 57
	20	20 24	19 56	19 30	19 03	18 40	18 16	17 58	17 35
	40	21 07	20 39	20 12	19 44	19 20	18 55	18 36	18 13
10	00	21 50	21 21	20 54	20 25	20 00	19 34	19 12	18 51
	20	22 33	22 06	21 36	21 06	20 40	20 13	19 50	19 29
	40	23 18	22 49	22 18	21 47	21 20	20 52	20 29	20 07
11	00	24 00	23 32	23 00	22 27	22 00	21 31	21 08	20 45
	20		24 11	23 42	23 07	22 40	22 10	21 47	21 23
	40			24 24	23 48	23 20	22 50	22 26	22 01
12	00				24 29	24 00	23 29	23 05	22 39
	20						24 08	23 44	23 17
	40							24 20	23 55
13	00								24 33

The TABLE (Continu'd,) *ſhewing the Lunar Aſpects by Inſpection; by help of the Diurnal Motion, and Diſtance at Noon, of the Moon and Planet.*

Diſt. at Noon	Diurnal Motion of the Moon from the Planet.								
	° 13	' 15	' 30	' 45	° 14	' 15	' 30	' 45	° 15
° '	h. '	h. '	h. '	h. '	h. '	h. '	h. '	h. '	h. '
05	0 09	0 09	0 09	0 09	0 09	0 08	0 08	0 08	0 07
10	0 19	0 18	0 18	0 18	0 18	0 17	0 16	0 16	0 14
15	0 28	0 27	0 27	0 27	0 26	0 25	0 24	0 24	0 22
20	0 37	0 36	0 36	0 36	0 35	0 34	0 33	0 33	0 32
40	1 14	1 12	1 12	1 10	1 09	1 08	1 06	1 06	1 05
1 00	1 51	1 48	1 47	1 45	1 40	1 41	1 39	1 38	1 35
20	2 28	2 24	2 23	2 18	2 16	2 14	2 12	2 10	2 07
40	3 05	3 00	2 58	2 53	2 50	2 48	2 45	2 43	2 38
2 00	3 42	3 37	3 34	3 28	3 25	3 22	3 18	3 15	3 12
20	4 19	4 13	4 10	4 07	4 05	3 56	3 51	3 48	3 44
40	4 56	4 49	4 46	4 38	4 30	4 27	4 24	4 20	4 16
3 00	5 33	5 26	5 20	5 14	5 09	5 03	4 58	4 53	4 48
20	6 10	6 02	5 56	5 48	5 44	5 37	5 31	5 25	5 20
40	6 47	6 38	6 32	6 23	6 16	6 10	6 04	6 00	5 52
4 00	7 24	7 15	7 08	6 58	6 51	6 44	6 37	6 33	6 24
20	8 00	7 50	7 44	7 33	7 25	7 18	7 10	7 05	6 56
40	8 37	8 27	8 19	8 08	8 00	7 52	7 44	7 37	7 30
5 00	9 15	9 03	8 54	8 43	8 35	8 25	8 17	8 11	8 00
20	9 51	9 39	9 30	9 18	9 09	9 00	8 50	8 44	8 31
40	10 28	10 13	10 04	9 53	9 44	9 34	9 23	9 17	9 03
6 00	11 05	10 51	10 40	10 28	10 18	10 06	9 56	9 46	9 36

The TABLE (Continu'd,) *ſhewing the Lunar Aſpects by Inſpection, by help of the Diurnal Motion, and Diſtance at Noon, of the Moon and Planet.*

Diſt. at Noon.	Diurnal Motion of the Moon from the Planet.								
	° 13	' 15	' 30	' 45	° 14	' 15	' 30	' 45	° 15
° '	h. '	h. '	h. '	h. '	h. '	h. '	h. '	h. '	h. '
6 20	11 42	11 27	11 16	11 03	10 50	10 40	10 30	10 22	10 08
40	12 18	12 03	11 52	11 58	11 25	11 13	11 03	10 54	10 41
7 00	12 55	12 39	12 27	12 12	12 00	11 46	11 36	11 26	11 13
20	13 32	13 15	13 09	12 47	12 35	12 20	12 09	11 57	11 44
40	14 09	13 51	13 38	13 23	13 10	12 54	12 42	12 30	12 16
8 00	14 46	14 28	14 14	13 57	13 44	13 29	13 15	13 03	12 48
20	15 23	15 04	14 50	14 32	14 19	14 02	13 48	13 36	13 21
40	16 00	15 40	15 24	15 07	14 54	14 35	14 21	14 09	13 54
9 00	16 36	16 16	15 59	15 42	15 26	15 09	14 54	14 39	14 26
20	17 13	16 52	16 35	16 16	16 00	15 43	15 27	15 10	14 58
40	17 50	17 28	17 10	16 51	16 34	16 16	16 00	15 42	15 28
10 00	18 27	18 04	17 46	17 26	17 10	16 50	16 33	16 15	16 00
20	19 04	18 40	18 21	18 01	17 45	17 24	17 06	16 47	16 32
40	19 41	19 16	18 57	18 36	18 19	17 58	17 40	17 20	17 04
11 00	20 17	19 52	19 31	19 10	18 53	18 31	18 13	17 48	17 36
20	20 55	20 27	20 05	19 45	19 27	19 05	18 46	18 30	18 08
40	21 32	21 04	20 38	20 20	20 02	19 38	19 19	19 06	18 40
12 00	22 09	21 41	21 10	20 55	20 37	20 13	19 52	19 36	19 12
20	22 46	22 17	21 41	21 30	21 12	20 46	20 25	20 06	19 44
40	23 23	22 53	22 11	22 05	21 47	21 20	20 58	20 40	19 16
13 00	24 00	23 28	23 09	22 40	22 22	21 54	21 31	21 09	20 48
20		24 04	23 45	23 15	22 57	22 28	22 04	21 42	21 20
40			24 20	23 51	23 32	23 02	22 37	22 14	21 53
14 00				24 26	23 47	23 36	23 10	22 44	22 24
20					24 00	24 10	23 43	23 20	22 56

A TABLE *of the Inclination of the Moon's Orb with the Equinoctial, ſhewn by the Place of her North Node.*

☊	♈			♉			♊			☊
°	°	′	″	°	′	″	°	′	″	°
0	28	46	20	27	0	33	25	14	47	30
1	28	42	48	26	57	2	25	11	15	29
2	28	39	17	26	53	30	25	7	44	28
3	28	35	45	26	49	59	25	4	12	27
4	28	32	14	26	26	27	25	0	40	26
5	28	28	42	26	42	56	24	57	9	25
6	28	25	11	26	39	24	24	53	37	24
7	28	21	39	26	35	52	24	50	6	23
8	28	18	8	26	32	21	24	46	34	22
9	28	14	36	26	28	49	24	43	3	21
10	28	11	4	26	25	18	24	39	31	20
11	28	7	33	26	21	46	24	36	0	19
12	28	4	1	26	18	15	24	32	28	18
13	28	0	30	26	14	43	24	28	56	17
14	27	56	58	26	11	12	24	25	25	16
15	27	53	27	26	7	40	24	21	53	15
16	27	49	55	26	4	8	24	18	22	14
17	27	46	24	26	0	37	24	14	50	13
18	27	42	52	25	57	5	24	11	19	12
19	27	39	20	25	53	34	24	7	47	11
20	27	35	49	25	50	2	24	4	16	10
21	27	32	17	25	46	31	24	0	44	9
22	27	28	46	25	42	59	23	57	12	8
23	27	25	14	25	39	28	23	53	41	7
24	27	21	43	25	35	56	23	50	9	6
25	27	18	11	25	32	24	23	46	38	5
26	27	14	40	25	28	53	23	43	6	4
27	27	11	8	25	25	21	23	39	35	3
28	27	7	36	25	21	50	23	36	3	2
29	27	4	5	25	18	18	23	32	32	1
30	27	0	33	25	14	47	23	29	0	0
☊	♓			♒			♑			☊

☊	♋			♌			♍			☊
°	°	′	″	°	′	″	°	′	″	°
0	23	29	00	21	43	13	19	57	27	30
1	23	25	28	21	39	42	19	53	55	29
2	23	21	57	21	36	10	19	50	24	28
3	23	18	25	21	32	39	19	46	52	27
4	23	14	54	21	29	07	19	43	20	26
5	23	11	22	21	25	36	19	39	49	25
6	23	07	51	21	22	04	19	36	17	24
7	23	04	19	21	18	32	19	32	46	23
8	23	00	48	21	15	01	19	29	14	22
9	22	57	16	21	11	29	19	25	43	21
10	22	53	44	21	07	58	19	22	11	20
11	22	50	13	21	04	26	19	18	40	19
12	22	46	41	21	00	55	19	15	08	18
13	22	43	10	20	57	23	19	11	36	17
14	22	39	38	20	53	52	19	08	05	16
15	22	36	07	20	50	20	19	04	33	15
16	22	32	35	20	46	48	19	01	02	14
17	22	29	04	20	43	17	18	57	30	13
18	22	25	32	20	39	45	18	53	59	12
19	22	22	00	20	36	14	18	50	27	11
20	22	18	29	20	32	42	18	46	56	10
21	22	14	57	20	29	11	18	43	24	9
22	22	11	26	20	25	39	18	39	52	8
23	22	07	54	20	22	08	18	36	21	7
24	22	04	23	20	18	36	18	32	49	6
25	22	00	51	20	15	04	18	29	18	5
26	21	57	20	20	11	33	18	25	46	4
27	21	53	48	20	08	01	18	22	15	3
28	21	50	16	20	04	30	18	18	43	2
29	21	46	45	20	00	58	18	15	12	1
30	21	43	13	19	57	27	18	11	40	0
☊	♐			♏			♎			☊

A TABLE *of the Declination and Meridian Angle, to every Degree of the Ecliptic.*

Med. Cœli.	Declination ♈ ♎			Meridian Angle.			Declination. ♉ ♏			Meridian Angle.			*Med. Cœli.*
°	°	′	″	°	′	″	°	′	″	°	′	″	°
0	0	0	0	66	31	00	11	29	33	69	22	51	30
1	0	23	54	66	31	11	11	50	35	69	34	27	29
2	0	47	48	66	31	46	12	11	26	69	46	26	28
3	1	11	42	66	32	43	12	32	04	69	58	46	27
4	1	35	34	66	34	04	12	52	31	70	11	30	26
5	1	59	25	66	35	47	13	12	44	70	24	35	25
6	2	23	14	66	37	53	13	32	45	70	38	02	24
7	2	47	1	66	40	23	13	52	32	70	51	51	23
8	3	10	45	66	43	15	14	12	05	71	06	02	22
9	3	34	26	66	46	30	14	31	24	71	20	35	21
10	3	58	4	66	50	08	14	50	28	71	35	29	20
11	4	21	38	66	54	09	15	09	17	71	50	45	19
12	4	45	9	66	58	33	15	27	50	72	06	22	18
13	5	8	34	67	03	20	15	46	09	72	22	21	17
14	5	31	55	67	08	30	16	04	11	72	38	40	16
15	5	55	11	67	14	03	16	21	57	72	55	20	15
16	6	18	21	67	19	58	16	39	26	73	12	21	14
17	6	41	26	67	26	17	16	56	37	73	29	43	13
18	7	4	23	67	32	58	17	13	31	73	47	24	12
19	7	27	15	67	40	02	17	30	07	74	05	26	11
20	7	49	59	67	47	30	17	46	25	74	23	48	10
21	8	12	36	67	55	19	18	02	24	74	42	29	9
22	8	35	5	68	03	32	18	18	03	75	01	29	8
23	8	57	26	68	12	08	18	33	24	75	20	49	7
24	9	19	39	68	21	06	18	48	25	75	40	28	6
25	9	41	43	68	30	27	19	03	05	76	00	25	5
26	10	3	37	68	40	11	19	17	25	76	20	40	4
27	10	25	21	6	50	17	19	31	25	76	41	14	3
28	10	46	56	69	00	45	19	45	03	77	02	05	2
29	11	8	20	69	11	37	19	58	20	77	23	13	1
30	11	29	33	69	22	51	20	11	15	77	44	38	0
	♓			♍				♒		♌			

Med. Cæli.	Declination. ♊ ♐			Meridian Angle.			Med. Cæli.
	°	'	"	°	'	"	
0	20	11	15	77	44	38	30
1	20	23	48	78	06	20	29
2	20	35	59	78	28	18	28
3	20	47	47	78	50	31	27
4	20	59	12	79	13	00	26
5	21	10	14	79	35	45	25
6	21	20	52	79	58	53	24
7	21	31	07	80	21	55	23
8	21	40	57	80	45	21	22
9	21	50	23	81	09	01	21
10	21	59	25	81	32	52	20
11	22	08	02	81	56	56	19
12	22	16	14	82	21	12	18
13	22	24	00	82	45	39	17
14	22	31	20	83	10	16	16
15	22	38	16	83	35	03	15
16	22	44	45	83	59	59	14
17	22	50	48	84	25	05	13
18	22	56	25	84	50	18	12
19	23	01	36	85	15	40	11
20	23	06	20	85	41	08	10
21	23	10	38	86	06	43	9
22	23	14	28	86	32	23	8
23	23	17	52	86	58	09	7
24	23	20	49	87	23	59	6
25	23	23	19	87	49	53	5
26	23	25	22	88	15	51	4
27	23	26	57	88	41	51	3
28	23	28	05	89	07	53	2
29	13	28	46	89	33	56	1
30	23	29	00	90	00	00	0
	♑			♋			

A TABLE *of the Nonageſime Degree, to every Degree of Longitude of the Mid-Heaven; or, anſwering to the Right Aſcenſion of the Mid-Heaven: For the Six Northern Signs, and Latitude* 51° 32′ *N.*

Cuſp 10 ♈	*R. A. M. C.*		*Nonageſime Degree.*		*Cuſp* 10. ♉	*R. A. M. C.*		*Nonageſime Degree.*	
°	°	′	°	′	°	°	′	°	′
0	0	0	26♈	42	0	27	54	16♉	31
1	0	55	27	23	1	28	51	17	11
2	1	50	28	2	2	29	49	17	51
3	2	45	28	42	3	30	46	18	31
4	3	40	29	21	4	31	44	19	12
5	4	35	0♉	1	5	32	42	19	52
6	5	33	0	40	6	33	40	20	32
7	6	25	1	20	7	34	39	21	13
8	7	11	2	0	8	35	37	21	54
9	8	16	2	39	9	36	36	22	25
10	9	11	3	19	10	37	35	23	16
11	10	6	3	59	11	38	34	23	57
12	11	2	4	38	12	39	33	24	38
13	11	55	5	17	13	40	32	25	19
14	12	53	5	57	14	41	32	26	0
15	13	48	6	36	15	42	31	26	42
16	14	44	7	15	16	43	31	27	24
17	15	40	7	55	17	44	31	28	6
18	16	36	8	35	18	45	32	28	47
19	17	31	9	14	19	46	32	29	30
20	18	27	9	54	20	47	33	0♊	13
21	19	24	10	33	21	48	33	0	55
22	20	20	11	12	22	49	34	1	37
23	21	16	11	52	23	50	35	2	20
24	22	13	12	32	24	51	37	3	2
25	23	9	13	12	25	52	38	3	46
26	24	6	13	52	26	53	40	4	29
27	25	2	14	32	27	54	42	5	12
28	26	0	15	12	28	55	44	5	55
29	26	57	15	51	29	56	46	6	39
30	27	54	16	31	30	57	48	7	22

For the Six Northern Signs, and Lat. 51° 32′ N.

Cuſp 10 ♊	R. A. M. C.		Nonage-ſime De-gree.		Cuſp 10 ♋	R. A. M. C.	Nonage-ſime De-gree.	
°	°	′	°	′	°	°	°	′
0	57	48	7 ♊	22	0	90	0 ♋	00
1	58	51	8	06	1	91	0	47
2	59	54	8	50	2	92	1	33
3	60	57	9	34	3	93	2	19
4	62	0	10	18	4	94	3	05
5	63	3	11	03	5	95	3	51
6	64	6	11	47	6	96	4	37
7	65	10	12	31	7	97	5	23
8	66	13	13	16	8	98	6	09
9	67	17	14	01	9	99	6	55
10	68	21	14	46	10	100	7	40
11	69	25	15	31	11	101	8	26
12	70	29	16	16	12	103	9	12
13	71	34	17	01	13	104	9	57
14	72	38	17	46	14	105	10	43
15	73	43	18	32	15	106	11	28
16	74	47	19	17	16	107	12	14
17	75	52	20	04	17	108	12	59
18	76	57	20	49	18	109	13	45
19	78	2	21	35	19	110	14	30
20	79	7	22	20	20	111	15	14
21	80	12	23	06	21	112	15	59
22	81	17	23	51	22	113	16	44
23	82	22	24	37	23	114	17	29
24	83	28	25	23	24	115	18	14
25	84	33	26	09	25	116	18	58
26	85	38	26	55	26	118	19	42
27	86	44	27	41	27	119	20	26
28	87	49	28	27	28	120	21	10
29	88	55	29	13	29	121	21	54
30	90	00	00 ♋	00	30	122	22	38

For the Six Northern Signs, and Lat. 51° 32′ N.

Cuſp 10 ♌ °	R. A. M.C. °	Nonageſime Degree. °	′	Cuſp 10 ♍ °	R. A. M. C. °	Nonageſime Degree. °	′
0	122	22♋	38	0	152	13♌	30
1	123	23	22	1	153	14	9
2	124	24	5	2	154	14	49
3	125	24	48	3	155	15	29
4	126	25	32	4	156	16	9
5	127	26	16	5	157	16	48
6	128	26	58	6	158	17	28
7	129	27	41	7	159	18	8
8	130	28	22	8	160	18	47
9	131	29	6	9	161	19	27
10	132	29	47	10	162	20	6
11	133	0♌	30	11	162	20	46
12	134	1	13	12	163	21	26
13	135	1	55	13	164	22	5
14	136	2	36	14	165	22	45
15	137	3	18	15	166	23	24
16	138	4	0	16	167	24	4
17	139	4	41	17	168	24	43
18	140	5	22	18	169	25	23
19	141	6	4	19	170	26	2
20	142	6	45	20	171	26	41
21	143	7	26	21	172	27	22
22	144	8	6	22	173	28	1
23	145	8	47	23	174	28	40
24	146	9	28	24	174	29	20
25	147	10	8	25	175	29	50
26	148	10	48	26	176	0♍	39
27	149	11	29	27	177	1	19
28	150	12	9	28	178	2	0
29	151	12	50	29	179	2	30
30	152	13	30	30	180	3	19

For the Six Southern Signs, and Lat. 51° 32′ N.

Cuſp 10 ♎ °	R. A. M.C. °	Nonageſime Degree. °	′	Cuſp 10 ♏ °	R. A. M. C. °	Nonageſime Degree. °	′
0	180	3 ♍	19	0	208	25 ♍	15
1	181	3	59	1	209	26	5
2	182	4	40	2	210	26	56
3	183	5	20	3	211	27	47
4	184	6	2	4	212	28	39
5	185	6	48	5	213	29	31
6	186	7	24	6	214	0 ♎	24
7	186	8	5	7	215	1	19
8	187	8	46	8	216	2	13
9	188	9	20	9	217	3	10
10	189	10	10	10	218	4	6
11	190	10	52	11	219	5	5
12	191	11	35	12	220	6	1
13	192	12	18	13	221	7	0
14	193	12	50	14	222	8	0
15	194	13	43	15	223	9	2
16	195	14	26	16	224	10	6
17	196	15	10	17	225	11	10
18	197	15	54	18	226	12	14
19	198	16	39	19	227	13	21
20	198	17	23	20	228	14	29
21	199	18	8	21	229	15	37
22	200	18	54	22	230	16	46
23	201	19	39	23	231	17	58
24	202	20	26	24	232	19	11
25	203	21	14	25	233	10	27
26	204	22	1	26	234	21	43
27	205	22	49	27	235	23	3
28	206	23	37	28	236	24	24
29	207	24	26	29	237	25	47
30	208	25	15	30	238	27	10

For the Six Southern Signs, and Lat. 51° 32′ N.

Cuſp 10 ♐	R. A. M. C.	Nonageſime Degree.		Cuſp 10 ♑	R. A. M. C.	Nonageſime Degree.	
°	°	°	′	°	° ′	°	″
0	238	27♎	10	0	270	0♑	0
1	239	28	37	1	271	2	37
2	240	0♏	6	2	272	5	19
3	241	1	37	3	273	7	55
4	242	3	11	4	274	10	29
5	243	4	48	5	275	13	2
6	244	6	27	6	277	15	37
7	245	8	8	7	278	18	7
8	246	9	52	8	279	20	35
9	247	11	40	9	280	23	0
10	248	13	30	10	281	25	22
11	249	15	20	11	282	27	43
12	250	17	19	12	283	0♒	0
13	252	19	18	13	284	2	16
14	253	21	20	14	285	4	27
15	254	23	30	15	286	6	33
16	255	25	32	16	287	8	39
17	256	27	44	17	288	10	43
18	257	29	58	18	289	12	42
19	258	2♐	17	19	291	14	40
20	259	4	38	20	292	16	31
21	260	7	0	21	293	18	20
22	261	9	24	22	294	20	5
23	262	11	53	23	295	21	52
24	263	14	23	24	296	23	33
25	265	16	59	25	297	25	13
26	266	19	30	26	298	26	49
27	267	22	5	27	299	28	22
28	268	24	39	28	300	29	54
29	269	27	20	29	301	1♓	23
30	270	0♑	0	30	302	2	50

For the Six Southern Signs, and Lat. 51° 32′ N.

Cuſp 10 ♒	*R. A.* M. C.	*Nonageſime Degree.*		*Cuſp* 10 ♓	*R. A.* M. C.	*Nonageſime Degree.*	
°	°	°	′	°	°	°	′
0	302	2♓	50	0	332	4♈	45
1	303	4	14	1	333	5	35
2	304	5	37	2	334	6	23
3	305	6	58	3	335	7	12
4	306	8	17	4	336	8	0
5	307	9	33	5	337	8	48
6	308	10	49	6	338	9	35
7	309	12	3	7	339	10	22
8	310	13	14	8	340	11	7
9	311	14	24	9	341	11	52
10	312	15	32	10	342	12	37
11	313	16	40	11	342	13	23
12	314	17	46	12	343	14	7
13	315	18	53	13	344	14	51
14	316	19	56	14	345	15	35
15	317	20	58	15	346	16	17
16	318	22	0	16	347	17	1
17	319	23	0	17	348	17	44
18	320	23	59	18	349	18	26
19	321	24	58	19	350	19	9
20	322	25	55	20	351	19	52
21	323	26	51	21	352	20	33
22	324	27	47	22	353	21	15
23	325	28	41	23	354	21	56
24	326	29	36	24	354	22	37
25	327	0♈	29	25	355	23	18
26	328	1	32	26	356	23	59
27	329	2	14	27	357	24	39
28	330	3	5	28	358	25	21
29	331	3	56	29	359	26	6
30	332	4	45	30	360	26	42

A TABLE *of the Angle which the true Motion of the Moon from the Sun makes with the Ecliptic, in* ☌ *and* ☍.

The true hourly Motion of the Moon from the Sun.

Arg. Latit.	′		′		′		′		′		*Arg. Lat.*
Sign 0	27		28		29		30		31		*Sign* 5
Sign 9	°	′	°	′	°	′	°	′	°	′	*Sign* 11
Degrees.											Degr.
0	5	46	5	45	5	44	5	43	5	42	30
1	5	46	5	45	5	44	5	43	5	42	29
2	5	46	5	45	5	44	5	43	5	42	27
3	5	46	5	45	5	44	5	43	5	42	27
4	5	45	5	44	5	43	5	42	5	41	26
5	5	45	5	44	5	43	5	42	5	41	25
6	5	44	5	43	5	42	5	41	5	40	24
7	5	44	5	43	5	42	5	41	5	40	23
8	5	43	5	42	5	41	5	40	5	39	22
9	5	42	5	41	5	40	5	39	5	38	21
10	5	41	5	40	5	39	5	38	5	37	20
11	5	40	5	39	5	38	5	37	5	36	19
12	5	39	5	38	5	37	5	36	5	35	18

Arg. Latit.	′		′		′		′		′		*Arg. Lat.*
Sign 0	32		33		34		35		36		*Sign* 5
Sign 6	°	′	°	′	°	′	°	′	°	′	*Sign* 11
Degrees.											Degr.
0	5	41	5	40	5	39	5	38	5	37	30
1	5	41	5	40	5	39	5	38	5	37	29
2	5	41	5	40	5	39	5	38	5	37	28
3	5	41	5	40	5	39	5	38	5	37	27
4	5	40	5	39	5	38	5	37	5	36	26
5	5	40	5	39	5	38	5	37	5	36	25
6	5	39	5	38	5	37	5	36	5	35	24
7	5	39	5	38	5	37	5	36	5	35	23
8	5	38	5	37	5	36	5	35	5	34	22
9	5	37	5	36	5	35	5	34	5	33	21
10	5	36	5	35	5	34	5	33	5	32	20
11	5	35	5	34	5	33	5	32	5	31	19
12	5	34	5	33	5	32	5	31	5	30	18

A Table, ſhewing when the Sun, Moon or Stars will be in the Nonageſime Degree, Lat. 51° 32′ N.

Time.		R. A.	O. A.		Time.		R. A.	O. A.	
		♈	♋				♉	♌	
h.	′		°	′	h.	′		h.	′
0	0	0	26	42	1	52	0	16	31
0	4	1	27	23	1	55	1	17	11
0	7	2	28	02	1	59	2	17	51
0	11	3	28	42	2	03	3	18	31
0	15	4	29	21	2	07	4	19	12
0	18	5	0♌	01	2	11	5	19	52
0	22	6	0	40	2	15	6	20	32
0	26	7	1	20	2	19	7	21	13
0	29	8	2	00	2	22	8	21	54
0	33	9	2	39	2	26	9	22	25
0	37	10	3	19	2	30	10	23	16
0	40	11	3	59	2	34	11	23	57
0	44	12	4	38	2	38	12	24	38
0	48	13	5	17	2	42	13	25	19
0	51	14	5	57	2	46	14	26	00
0	55	15	6	36	2	50	15	26	42
0	59	16	7	15	2	54	16	27	24
1	2	17	7	55	2	58	17	28	06
1	6	18	8	35	3	02	18	28	47
1	10	19	9	14	3	06	19	29	30
1	14	20	9	54	3	10	20	00♍	13
1	18	21	10	33	3	14	21	00	55
1	21	22	11	12	3	18	22	01	37
1	25	23	11	52	3	22	23	02	20
1	29	24	12	32	3	26	24	03	02
1	33	25	13	12	3	31	25	03	46
1	36	26	13	52	3	35	26	04	29
1	40	27	14	32	3	39	27	05	12
1	44	28	15	12	3	43	28	05	55
1	48	29	15	51	3	47	29	06	39
1	52	30	16	31	3	51	30	07	22

Time.		R. A. ♊	O. A. ♍		Time.		R. A. ♋	O. A. ♎	
h.	'		°	'	h.	'		°	'
3	51	0	7	22	6	00	0	0	00
3	55	1	8	06	6	04	1	0	47
4	00	2	8	50	6	09	2	1	33
4	04	3	9	34	6	13	3	2	19
4	08	4	10	18	6	17	4	3	05
4	12	5	11	03	6	22	5	3	51
4	16	6	11	47	6	26	6	4	37
4	21	7	12	31	6	31	7	5	23
4	25	8	13	16	6	35	8	6	09
4	29	9	14	01	6	39	9	6	55
4	33	10	14	46	6	44	10	7	40
4	38	11	15	31	6	48	11	8	26
4	42	12	16	16	6	52	12	9	12
4	46	13	17	01	6	57	13	9	57
4	51	14	17	46	7	01	14	10	43
4	55	15	18	32	7	05	15	11	28
5	00	16	19	17	7	09	16	12	14
5	04	17	20	04	7	14	17	12	59
5	08	18	20	49	7	18	18	13	45
5	12	19	21	35	7	22	19	14	30
5	16	20	22	20	7	27	20	15	14
5	21	21	23	06	7	31	21	15	59
5	25	22	23	51	7	35	22	16	44
5	29	23	24	37	7	39	23	17	29
5	34	24	25	23	7	44	24	18	14
5	38	25	26	09	7	48	25	18	58
5	43	26	26	55	7	52	26	19	42
5	47	27	27	41	7	56	27	20	26
5	51	28	28	27	8	00	28	21	10
5	56	29	29	13	8	05	29	21	54
6	00	30	30	00	8	09	30	22	38

Time.		R. A.	O. A.		Time.		R. A.	O. A.	
		♌	♎				♍	♏	
h.	′		°	′	h.	′		h.	
8	9	0	22	38	10	8	0	13	30
8	13	1	23	22	10	12	1	14	9
8	17	2	24	5	10	16	2	14	49
8	21	3	24	48	10	20	3	15	29
8	25	4	25	32	10	24	4	16	9
8	29	5	26	16	10	27	5	16	48
8	34	6	26	58	10	31	6	17	28
8	38	7	27	41	10	35	7	18	8
8	42	8	28	22	10	39	8	18	47
8	46	9	29	6	10	42	9	19	27
8	50	10	29	47	10	46	10	20	6
8	54	11	0 ♍	30	10	50	11	20	46
8	58	12	1	13	10	54	12	21	26
9	2	13	1	55	10	57	13	22	5
9	6	14	2	36	11	1	14	22	45
9	10	15	3	18	11	5	15	23	24
9	14	16	4	0	11	9	16	24	4
9	18	17	4	41	11	12	17	24	43
9	21	18	5	22	11	16	18	25	23
9	26	19	6	4	11	20	19	26	2
9	30	20	6	45	11	24	20	26	41
9	34	21	7	26	11	27	21	27	22
9	38	22	8	6	11	31	22	28	1
9	41	23	8	47	11	34	23	28	40
9	45	24	9	28	11	38	24	29	20
9	49	25	10	8	11	42	25	29	50
9	53	26	10	48	11	45	26	0 ♐	30
9	57	27	11	29	11	49	27	1	19
10	1	28	12	9	11	53	28	2	0
10	5	29	12	50	11	56	29	2	30
10	8	30	13	30	12	0	30	3	19

Time.		*R. A.*	*O. A.*		Time.		*R. A.*	*O. A.*	
		♎	♐				♏	♐	
h.	'		°	'	h.	'		°	'
12	0	0	3	19	13	52	0	25	15
12	4	1	3	59	13	55	1	26	5
12	7	2	4	40	13	59	2	26	56
12	11	3	5	20	14	3	3	27	47
12	15	4	6	2	14	7	4	28	39
12	18	5	6	48	14	11	5	29	31
12	22	6	7	24	14	15	6	0 ♑	24
12	26	7	8	5	14	19	7	1	19
12	29	8	8	46	14	22	8	2	13
12	33	9	9	28	14	26	9	3	10
12	37	10	10	10	14	30	10	4	6
12	40	11	10	52	14	34	11	5	5
12	44	12	11	35	14	38	12	6	1
12	48	13	12	18	14	42	13	7	0
12	51	14	12	50	14	46	14	8	0
12	55	15	13	43	14	50	15	9	2
12	59	16	14	26	14	54	16	10	6
13	3	17	15	10	14	58	17	11	9
13	6	18	15	54	15	2	18	12	14
13	10	19	16	39	15	6	19	13	21
13	14	20	17	23	15	10	20	14	29
13	18	21	18	8	15	14	21	15	37
13	21	22	18	54	15	18	22	16	46
13	25	23	19	39	15	22	23	17	58
13	29	24	20	26	15	26	24	19	11
13	33	25	21	14	15	31	25	20	27
13	36	26	22	1	15	35	26	21	23
13	40	27	22	47	15	39	27	23	3
13	44	28	23	36	15	43	28	24	24
13	48	29	24	26	15	47	29	25	47
13	52	30	25	15	15	51	30	27	10

Time.		R. A.	O. A.		Time.		R. A.	O. A.	
		♐	♑				♑	♈	
h.	′		°	′	h.	′		°	′
15	51	0	27	10	18	0	0	0	0
15	55	1	28	37	18	4	1	2	37
16	0	2	0♒	6	18	9	2	5	19
16	4	3	1	37	18	13	3	7	55
16	8	4	3	11	18	17	4	10	29
16	12	5	4	48	18	22	5	13	2
16	16	6	6	27	18	26	6	15	37
16	21	7	8	8	18	31	7	18	7
16	25	8	9	52	18	35	8	20	35
16	29	9	11	40	18	39	9	23	0
16	33	10	13	30	18	44	10	25	22
16	38	11	15	20	18	48	11	27	43
16	42	12	17	19	18	52	12	30	0
16	46	13	19	18	18	57	13	2♉	16
16	51	14	21	20	19	1	14	4	27
16	55	15	23	30	19	5	15	6	33
16	59	16	25	32	19	9	16	8	39
17	3	17	27	44	19	14	17	10	43
17	8	18	29	58	19	18	18	12	43
17	12	19	2♓	17	19	22	19	14	40
17	16	20	4	38	19	27	20	16	31
17	21	21	7	0	19	31	21	18	20
17	25	22	9	24	19	35	22	20	5
17	29	23	11	53	19	39	23	21	52
17	34	24	14	23	19	44	24	23	33
17	38	25	16	59	19	48	25	25	13
17	43	26	19	30	19	52	26	26	49
17	47	27	22	5	19	56	27	28	22
17	51	28	24	29	20	0	28	29	54
17	56	29	27	20	20	5	29	1♊	23
18	0	30	30	0	20	9	30	2	50

Time.		*R. A.*	*O. A.*		Time.		*R. A.*	*O. A.*	
		♒	♊				♓	♋	
h.	'		°	'	h.	'		°	'
20	9	0	2	50	22	8	0	4	45
20	13	1	4	14	22	12	1	5	35
20	17	2	5	37	22	16	2	6	23
20	21	3	6	58	22	20	3	7	12
20	25	4	8	17	22	24	4	8	0
20	29	5	9	33	22	27	5	8	48
20	33	6	10	49	22	31	6	9	35
20	38	7	12	3	22	35	7	10	22
20	42	8	13	14	22	39	8	11	7
20	46	9	14	24	22	42	9	11	52
20	50	10	15	32	22	46	10	12	37
20	54	11	16	40	22	50	11	13	23
20	58	12	17	46	22	54	12	14	7
21	2	13	18	53	22	57	13	14	51
21	6	14	19	56	23	1	14	15	35
21	10	15	20	58	23	5	15	16	17
21	14	16	22	0	23	9	16	17	1
21	18	17	23	0	23	12	17	17	44
21	22	18	23	59	23	16	18	18	26
21	26	19	24	58	23	20	19	19	9
21	30	20	25	55	23	23	20	19	52
21	34	21	26	51	23	27	21	20	33
21	38	22	27	47	23	31	22	21	15
21	41	23	28	41	23	34	23	21	56
21	45	24	29	36	23	38	24	22	37
21	49	25	0♋	29	23	42	25	23	18
21	53	26	1	22	23	45	26	23	59
21	57	27	2	14	23	49	27	24	39
22	1	28	3	5	23	53	28	25	21
22	5	29	3	56	23	56	29	26	2
22	8	30	4	45	24	0	30	26	42

A TABLE *of* Mercury's *Mean Motion in Years.*

	Years Compleat.	Longitude ☿.				Anomaly ☿.				Node ☿.			
		S.	°	'	"	S.	°	'	"	S	°	'	"
	1	01	23	43	02	01	23	42	10	0	00	00	50
	2	03	17	26	04	03	17	24	19	0	00	01	40
	3	05	11	09	06	05	11	06	27	0	00	02	30
B	4	07	08	57	40	07	08	54	08	0	00	03	20
	5	09	02	40	43	09	02	36	17	0	00	04	10
	6	10	26	23	45	10	26	18	26	0	00	05	00
	7	00	20	06	47	00	20	00	36	0	00	05	50
B	8	02	17	55	21	02	17	48	16	0	00	06	40
	9	04	11	38	23	04	11	30	25	0	00	07	30
	10	06	05	21	25	06	05	12	34	0	00	08	20
	11	07	29	04	27	07	28	54	44	0	00	09	10
B	12	09	26	53	02	09	26	42	24	0	00	10	00
	13	11	20	35	04	11	20	24	43	0	00	10	50
	14	01	14	19	06	01	14	06	52	0	00	11	40
	15	03	08	02	08	03	07	49	01	0	00	12	30
B	16	05	05	50	42	05	05	36	42	0	00	13	20
	17	06	29	33	44	06	29	18	51	0	00	14	10
	18	08	23	16	46	08	23	01	00	0	00	15	00
	19	10	16	59	48	10	16	43	09	0	00	15	50
B	20	00	14	48	23	00	14	30	51	0	00	16	40
	40	00	29	36	45	00	29	01	42	0	00	33	20
	60	01	14	25	08	01	13	32	34	0	00	50	00
	80	01	29	13	30	01	28	03	24	0	01	06	40
	100	02	14	01	53	02	12	34	16	0	01	23	20
	200	04	28	03	46	04	25	08	32	0	02	46	40
	300	07	12	05	39	07	07	42	48	0	04	10	00
	400	09	06	07	32	09	20	17	04	0	05	33	20
	500	00	10	09	25	00	02	51	20	0	06	56	40
	600	02	24	11	18	02	15	25	36	0	08	20	00
	700	05	08	13	11	04	27	59	52	0	09	43	20
	800	07	22	15	04	07	10	34	08	0	11	06	40
	900	10	06	16	57	09	23	08	24	0	12	30	00
	1000	00	20	18	50	00	05	42	40	0	13	53	20
	2000	01	10	37	40	00	11	25	20	0	27	46	40
	3000	02	00	56	30	00	17	08	00	1	11	40	00
	4000	02	21	15	20	00	22	50	40	1	23	33	20

Years of Chriſt.	Longitude ☿.				Anomaly ☿.				Node ☿.			
	S.	°	′	″	S.	°	′	″	S.	°	′	″
1	10	18	20	31	3	0	28	43	0	21	28	10
101	1	2	22	24	5	13	2	59	0	22	51	30
201	3	16	24	17	7	25	37	15	0	24	14	50
301	6	0	26	10	10	8	11	31	0	25	38	10
401	8	24	28	3	0	20	45	47	0	27	1	30
501	10	28	29	56	3	3	20	3	0	28	24	50
601	1	12	31	49	5	15	54	19	0	29	48	10
701	3	26	33	42	7	28	28	35	1	1	11	30
801	6	10	35	35	10	11	2	51	1	2	34	50
901	8	24	37	28	0	23	37	7	1	3	58	10
1001	11	8	39	21	3	6	11	23	1	5	21	30
1101	1	22	41	14	5	18	45	39	1	6	44	50
1201	4	6	43	7	8	1	19	55	1	8	8	10
1301	6	20	45	0	10	13	54	11	1	9	31	30
1401	9	11	46	53	0	26	28	27	1	10	54	50
1501	11	18	48	46	3	9	2	43	1	12	18	10
1601	2	2	50	39	5	21	36	59	1	13	41	30
1701	4	16	55	32	8	4	11	15	1	14	48	10
1801	7	0	57	25	10	16	45	31	1	16	11	30
1901	9	14	59	18	0	29	19	47	1	17	34	50
2001	11	29	1	11	3	11	54	3	1	18	58	10
1678	10	16	52	31	2	4	28	26	1	14	29	0
1679	0	10	35	33	3	28	10	36	1	14	29	50
1680	2	4	18	35	5	21	52	46	1	14	30	40
1681	4	2	7	9	7	19	40	24	1	14	31	30
1682	5	25	50	11	9	13	22	33	1	14	32	20
1683	7	19	33	13	11	7	4	43	1	14	33	10
1684	9	13	16	15	1	0	46	53	1	14	34	0
1685	11	11	4	49	2	28	34	34	1	14	34	50
1686	1	34	47	51	4	22	16	44	1	14	35	40
1687	2	28	30	53	6	15	58	54	1	14	36	30
1688	4	22	13	56	8	9	41	3	1	14	37	20
1689	6	20	2	29	10	7	28	45	1	14	38	10
1690	8	13	45	31	0	1	10	55	1	14	39	0
1691	10	7	28	33	1	24	53	4	1	14	39	50
1692	0	1	11	35	3	18	35	14	1	14	40	40

Years of Chriſt.	Longitude ☿.				Anomaly ☿.				Node ☿.			
	S.	°	′	″	S.	°	′	″	S.	°	′	″
1693	1	29	0	11	5	16	22	55	1	14	41	30
1694	3	22	43	13	7	10	5	5	1	14	42	20
1695	5	16	26	15	9	3	47	15	1	14	43	10
1696	7	10	9	17	10	27	29	25	1	14	44	0
1697	9	7	57	51	0	25	17	1	1	14	44	50
1698	11	1	40	53	2	18	59	24	1	14	45	40
1699	0	25	23	55	4	12	41	24	1	14	46	30
1700	2	19	6	57	6	6	23	33	1	14	47	20
1701	4	16	55	32	8	4	11	15	1	14	48	10
1702	6	10	38	34	9	27	53	25	1	14	49	0
1703	8	4	21	36	11	21	35	33	1	14	49	50
1704	9	28	4	38	1	15	17	42	1	14	50	40
1705	11	25	53	12	3	13	5	24	1	14	51	30
1706	1	19	36	14	5	6	47	32	1	14	52	20
1707	3	13	19	17	7	0	29	42	1	14	53	10
1708	5	7	2	18	8	24	11	52	1	14	54	0
1709	7	4	50	53	10	21	59	33	1	14	54	50
1710	8	28	33	56	0	15	41	42	1	14	55	40
1711	10	22	16	58	2	9	23	52	1	14	56	30
1712	0	16	0	0	4	3	6	0	1	14	57	20
1713	2	13	48	34	6	0	53	41	1	14	58	10
1714	4	7	31	36	7	24	35	51	1	14	59	0
1715	6	1	14	38	9	18	18	0	1	14	59	50
1716	8	24	57	40	11	12	0	10	1	15	0	40
1717	10	22	16	14	1	9	47	50	1	15	1	30
1718	0	16	29	16	3	3	30	0	1	15	2	20
1719	2	10	12	18	4	27	12	8	1	15	3	10
1720	4	3	55	20	6	20	54	23	1	15	4	0
1721	5	1	43	55	8	18	42	6	1	15	4	50
1722	6	25	26	57	10	12	24	16	1	15	5	40
1723	8	19	9	59	0	6	6	25	1	15	6	30
1724	10	12	53	1	1	29	48	35	1	15	7	20
1725	0	10	41	35	3	27	36	17	1	15	8	10
1726	2	4	24	37	5	21	18	26	1	15	9	0
1727	3	28	7	39	7	15	0	35	1	15	9	50
1728	5	21	50	41	9	8	42	45	1	15	10	40

Years of Chriſt.	Longitude ☿.				Anomaly ☿.				Node ☿.			
	S.	°	′	″	S.	°	′	″	S.	°	′	″
1729	7	19	39	16	11	6	30	26	1	15	11	30
1730	9	13	22	18	1	0	12	36	1	15	12	20
1731	11	7	5	20	2	28	54	45	1	15	13	20
1732	1	0	48	22	4	17	36	54	1	15	14	0
1733	2	28	36	56	6	15	24	35	1	15	14	50
1734	4	22	19	58	8	9	6	44	1	15	15	40
1735	6	16	3	0	10	2	48	54	1	15	16	30
1736	8	9	46	3	11	26	31	3	1	15	17	20
1737	10	7	34	37	1	24	18	45	1	15	18	10
1738	0	1	17	39	3	18	0	54	1	15	19	0
1739	1	25	0	41	5	11	43	4	1	15	19	50
1740	3	18	43	44	7	5	25	14	1	15	20	40
1741	5	16	32	18	9	3	12	57	1	15	21	30
1742	7	10	15	20	10	26	55	7	1	15	22	20
1743	9	3	58	22	0	20	37	16	1	15	23	10
1744	10	27	41	24	2	14	19	26	1	15	24	0
1745	0	25	29	58	4	12	7	7	1	15	24	50
1746	1	19	13	0	6	5	49	17	1	15	25	40
1747	3	12	56	2	7	19	31	26	1	15	26	30
1748	5	6	39	5	9	23	13	36	1	15	27	20
1749	7	4	27	39	11	21	1	18	1	15	28	10
1750	8	28	10	41	1	14	43	27	1	15	29	0
1751	10	21	53	43	3	8	25	37	1	15	29	50
1752	0	15	36	45	5	2	7	46	1	15	30	40
1753	2	53	25	19	6	29	55	28	1	15	31	30
1754	4	7	8	21	8	23	37	37	1	15	32	20
1755	6	0	51	23	10	17	19	47	1	15	33	10
1756	7	24	34	26	0	11	1	56	1	15	34	0
1757	9	22	23	0	2	8	49	38	1	15	34	50
1758	11	16	6	2	4	2	31	48	1	15	35	40
1759	1	9	49	4	5	26	13	58	1	15	36	30
1760	3	3	32	6	7	29	56	7	1	15	37	20
1761	6	1	20	41	9	17	43	48	1	15	38	10
1762	7	25	3	43	11	11	25	58	1	15	39	0
1763	9	18	46	45	1	5	8	8	1	15	39	50
1764	11	12	29	47	2	28	50	17	1	15	40	40

Years of Chriſt	Longitude ☿.				Anomaly ☿.				Node ☿.			
	S.	°	′	″	S.	°	′	″	S.	°	′	″
1765	1	10	18	21	4	26	37	59	1	15	41	30
1766	3	4	1	23	6	20	20	8	1	15	42	20
1767	4	27	44	26	8	14	2	18	1	15	43	10
1768	6	21	27	28	10	7	44	28	1	15	44	00
1769	8	19	16	2	0	5	32	10	1	15	44	50
1770	10	12	59	4	1	29	14	20	1	15	45	40
1771	0	6	42	6	3	22	56	29	1	15	46	30
1772	2	0	25	8	5	16	38	39	1	15	47	20
1773	3	28	13	42	7	14	26	21	1	15	48	10
1774	5	21	56	47	9	8	8	30	1	15	49	00
1775	7	15	39	47	11	1	50	38	1	15	49	50
1776	9	9	22	49	0	25	32	47	1	15	50	40
1777	11	7	11	23	2	23	20	29	1	15	51	30
1778	1	0	54	25	4	17	2	38	1	15	52	20
1779	2	24	37	27	6	10	44	48	1	15	53	10
1780	4	18	20	29	8	4	26	57	1	15	54	00
1781	6	16	9	4	10	2	14	39	1	15	54	50
1782	8	9	52	6	11	25	56	49	1	15	55	40
1783	10	3	35	8	1	19	38	58	1	15	56	30
1784	11	27	18	10	3	13	21	8	1	15	57	20
1785	1	25	6	44	5	11	8	50	1	15	58	10
1786	3	18	49	46	7	4	50	59	1	15	59	00
1787	5	12	32	49	8	28	33	9	1	15	59	50
1788	7	6	15	51	10	22	15	19	1	16	0	40
1789	9	4	4	25	0	20	3	1	1	16	1	30
1790	10	27	47	27	2	13	45	10	1	16	2	20
1791	0	21	30	30	4	7	27	20	1	16	3	10
1792	2	15	13	32	6	1	9	29	1	16	4	00
1793	4	13	2	6	7	28	57	11	1	16	4	50
1794	6	6	45	8	9	22	39	20	1	16	5	40
1795	8	0	28	10	11	16	21	29	1	16	6	30
1796	9	24	11	12	1	10	3	39	1	16	7	20
1797	11	21	59	48	3	7	51	21	1	16	8	10
1798	1	15	42	48	5	1	33	30	1	16	9	00
1799	3	9	25	50	6	25	15	40	1	16	9	50
1800	5	3	8	52	8	18	57	49	1	16	10	40

Years of Chriſt.	Longitude ☿.				Anomaly ☿.				Node ☿.			
	S.	°	′	″	S.	°	′	″	S.	°	′	″
1801	7	0	57	27	10	16	45	31	1	16	11	30
1802	8	24	40	29	0	10	27	41	1	16	12	20
1803	10	18	23	31	2	4	9	50	1	16	13	10
1804	0	12	6	33	3	27	52	0	1	16	14	0
1805	2	9	55	7	5	25	39	41	1	16	14	50
1806	4	3	38	9	7	19	21	51	1	16	15	40
1807	5	27	31	12	9	13	4	0	1	16	16	30
1808	7	21	4	14	11	6	46	10	1	16	17	20
1809	9	18	52	48	1	9	33	51	1	16	18	10
1810	11	12	35	50	2	28	16	1	1	16	19	0
1811	1	6	18	52	4	21	58	11	1	16	19	50
1812	3	0	1	54	6	15	40	20	1	16	20	40
1813	4	27	50	28	8	13	28	2	1	16	21	30
1814	6	21	33	31	10	7	10	11	1	16	22	20
1815	8	15	16	33	0	0	52	21	1	16	23	10
1816	10	18	59	35	1	24	34	30	1	16	24	0
1817	0	6	49	8	3	22	22	12	1	16	24	50
1818	2	0	31	11	5	16	4	21	1	16	25	40
1819	3	24	14	13	7	9	46	31	1	16	26	30
1820	5	17	57	15	9	3	28	40	1	16	27	20
1821	7	15	45	50	11	1	16	22	1	16	28	10
1822	9	9	28	52	0	24	58	32	1	16	29	0
1823	11	3	11	54	2	18	40	41	1	16	29	50
1824	0	26	54	56	4	12	22	51	1	16	30	40
1825	2	24	43	30	6	10	10	32	1	16	31	30
1826	4	18	26	32	8	3	52	42	1	16	32	20
1827	6	12	9	34	9	27	34	51	1	16	33	10
1828	8	5	52	37	11	21	17	1	1	16	34	0
1829	10	3	41	11	1	19	4	42	1	16	34	50
1830	11	27	24	13	3	12	46	52	1	16	35	40
1831	1	21	7	15	5	6	29	1	1	16	36	30
1832	3	14	50	17	7	0	11	12	1	16	37	20
1833	5	12	38	51	8	27	58	53	1	16	38	10
1834	7	6	21	53	10	21	41	3	1	16	39	0
1835	9	0	4	55	0	15	23	13	1	16	39	50
1836	10	23	47	58	2	9	5	23	1	16	40	40

JANUARY.

Common Year.	Longitude ☿.				Anomaly ☿.				Biſſextile.
	S.	°	'	''	S.	°	'	''	
1	0	4	5	32	0	4	5	32	0
2	0	8	11	5	0	8	11	5	1
3	0	12	16	38	0	12	16	38	2
4	0	16	22	10	0	16	22	10	3
5	0	20	27	43	0	20	27	43	4
6	0	24	33	16	0	24	33	16	5
7	0	28	38	48	0	28	38	47	6
8	1	2	44	21	1	2	44	20	7
9	1	6	49	53	1	6	49	52	8
10	1	10	55	26	1	10	55	25	9
11	1	15	0	58	1	15	0	57	10
12	1	19	6	31	1	19	6	30	11
13	1	23	12	4	1	23	12	3	12
14	1	27	17	36	1	27	17	34	13
15	2	1	23	9	2	1	23	7	14
16	2	5	28	41	2	5	28	39	15
17	2	9	34	14	2	9	34	12	16
18	2	13	39	47	2	13	39	45	17
19	2	17	45	19	2	17	45	17	18
20	2	21	50	52	2	21	50	50	19
21	2	25	56	24	2	25	56	21	20
22	3	0	1	57	2	0	1	54	21
23	3	4	7	40	3	4	7	27	22
24	3	8	13	2	3	8	12	59	23
25	3	12	18	35	3	12	18	32	24
26	3	16	24	7	3	16	24	4	25
27	3	20	29	40	3	20	29	37	26
28	3	24	35	13	3	24	35	10	27
29	3	28	40	45	3	28	40	42	28
30	4	2	46	17	4	2	46	14	29
31	4	6	51	49	4	6	51	46	30

Common Year.	FEBRUARY.								Biſſextile.
	Longitude ☿.				Anomaly ☿.				
	S.	°	′	″	S.	°	′	″	
1	4	10	57	21	4	10	57	18	0
2	4	15	2	54	4	15	2	51	1
3	4	19	8	27	4	19	8	24	2
4	4	23	13	59	4	23	13	56	3
5	4	27	19	32	4	27	19	28	4
6	5	1	25	5	5	1	25	1	5
7	5	5	30	37	5	5	30	33	6
8	5	9	36	10	5	9	36	6	7
9	5	13	41	42	5	13	41	38	8
10	5	17	47	15	5	17	47	11	9
11	5	21	52	47	5	21	52	43	10
12	5	25	58	20	5	25	58	16	11
13	6	0	3	53	6	0	3	49	12
14	6	4	9	25	6	4	9	19	13
15	6	8	14	58	6	8	14	52	14
16	6	12	20	30	6	12	20	24	15
17	6	16	26	3	6	16	25	57	16
18	6	20	31	36	6	20	31	30	17
19	6	24	37	8	6	24	37	2	18
20	6	28	42	41	6	28	42	35	19
21	7	2	48	13	7	2	48	6	20
22	7	6	53	46	7	6	53	39	21
23	7	10	59	19	7	10	59	12	22
24	7	15	4	51	7	15	4	44	23
25	7	19	10	24	7	19	10	17	24
26	7	23	15	56	7	23	15	49	25
27	7	27	21	29	7	27	21	21	26
28	8	1	27	2	8	1	26	54	27
29	8	5	32	34	8	5	32	26	28

MARCH.

Common Year.	Longitude ☿.				Anomaly ☿.				Biſſextile.
‖	S.	°	′	″	S.	°	′	″	‖
1	8	05	32	34	8	05	32	26	0
2	8	09	38	07	8	09	37	59	1
3	8	13	43	40	8	13	43	32	2
4	8	17	49	12	8	17	49	04	3
5	8	21	54	44	8	21	54	35	4
6	8	26	00	16	8	26	00	07	5
7	9	00	05	50	9	00	05	31	6
8	9	04	11	23	9	04	11	14	7
9	9	08	16	55	9	08	16	46	8
10	9	12	22	28	9	12	22	19	9
11	9	16	28	00	9	16	27	51	10
12	9	20	33	33	9	20	33	24	11
13	9	24	39	06	9	24	38	57	12
14	9	28	44	38	9	28	44	29	13
15	10	02	50	11	10	02	50	01	14
16	10	06	55	43	10	06	55	33	15
17	10	11	01	16	10	11	01	06	16
18	10	15	06	49	10	15	06	39	17
19	10	19	12	21	10	19	12	11	18
20	10	23	17	54	10	23	17	44	19
21	10	27	23	26	10	27	23	16	20
22	11	01	28	59	11	01	28	49	21
23	11	05	34	32	11	05	34	21	22
24	11	09	40	04	11	09	39	53	23
25	11	13	45	47	11	13	45	26	24
26	11	17	51	09	11	17	50	58	25
27	11	21	56	42	11	21	56	31	26
28	11	26	02	15	11	26	02	04	27
29	0	00	07	47	0	00	07	36	28
30	0	04	13	19	0	04	13	07	29
31	0	08	18	50	0	08	18	38	30

Common Year.	APRIL.								Bissextile.
	Longitude ☿.				Anomaly ☿.				
	S.	°	′	″	S.	°	′	″	
1	0	12	24	22	0	12	24	10	0
2	0	16	29	55	0	16	29	43	1
3	0	20	35	28	0	20	35	16	2
4	0	24	41	00	0	24	40	48	3
5	0	28	46	23	0	28	46	10	4
6	1	02	52	06	1	02	51	53	5
7	1	06	57	38	1	06	57	25	6
8	1	11	03	11	1	11	02	58	7
9	1	15	08	43	1	15	08	30	8
10	1	19	14	26	1	19	14	13	9
11	1	23	19	48	1	23	19	35	10
12	1	27	25	21	1	27	25	07	11
13	2	01	30	54	2	01	30	40	12
14	2	05	36	26	2	05	36	12	13
15	2	09	41	59	2	09	41	45	14
16	2	13	47	31	2	13	47	17	15
17	2	17	52	54	2	17	52	40	16
18	2	21	58	37	2	21	58	22	17
19	2	26	04	09	2	26	03	54	18
20	3	00	09	42	3	00	09	27	19
21	3	04	15	14	3	04	14	59	20
22	3	08	20	47	3	08	20	32	21
23	3	12	26	20	3	12	26	05	22
24	3	16	31	52	3	16	31	36	23
25	3	20	37	25	3	20	37	09	24
26	3	24	42	57	3	24	42	41	25
27	3	28	48	30	3	28	48	14	26
28	4	02	54	03	4	02	53	47	27
29	4	06	59	35	4	06	59	19	28
30	4	11	05	07	4	11	04	51	29
31	4	15	10	39	4	15	10	22	30

Common Year.	MAY.								Bissextile.
	Longitude ☿.				Anomaly ☿.				
	S.	°	′	″	S.	°	′	″	
1	4	15	10	39	4	15	10	22	0
2	4	19	16	12	4	19	15	55	1
3	4	23	21	45	4	23	21	28	2
4	4	27	27	17	4	27	27	00	3
5	5	01	32	50	5	01	32	33	4
6	5	05	58	23	5	05	58	06	5
7	5	09	43	55	5	09	43	38	6
8	5	13	49	28	5	13	49	10	7
9	5	17	55	00	5	17	54	42	8
10	5	22	00	33	5	22	00	15	9
11	5	26	06	05	5	26	05	47	10
12	6	00	11	38	6	00	11	20	11
13	6	04	17	11	6	04	16	53	12
14	6	08	22	43	6	08	22	25	13
15	6	12	28	16	6	12	27	57	14
16	6	16	33	48	6	16	33	29	15
17	6	20	39	21	6	20	39	02	16
18	6	24	44	54	6	24	44	35	17
19	6	28	50	26	6	28	50	07	18
20	7	02	55	59	7	02	55	40	19
21	7	07	01	31	7	07	01	11	20
22	7	11	07	04	7	11	06	44	21
23	7	15	12	37	7	15	12	17	22
24	7	19	18	09	7	19	17	49	23
25	7	23	23	42	7	23	23	22	24
26	7	27	29	14	7	27	28	54	25
27	8	01	34	47	8	01	34	27	26
28	8	05	40	20	8	05	40	00	27
29	8	09	45	22	8	09	45	01	28
30	8	13	51	25	8	13	51	04	29
31	8	17	56	56	8	17	56	35	30

Common Year.	JUNE.								Bissextile.
	Longitude ☿.				Anomaly ☿.				
	S.	°	′	″	S.	°	′	″	
1	8	22	2	28	8	22	2	7	0
2	8	26	8	1	8	26	7	40	1
3	9	0	13	34	9	0	13	13	2
4	9	4	19	6	9	4	18	45	3
5	9	8	24	39	9	8	24	17	4
6	9	12	30	12	9	12	29	50	5
7	9	16	35	44	9	16	35	22	6
8	9	20	41	17	9	20	40	55	7
9	9	24	46	49	9	24	46	27	8
10	9	28	52	22	9	28	52	0	9
11	10	2	57	54	10	2	57	32	10
12	10	7	3	27	10	7	3	4	11
13	10	11	9	0	10	11	8	37	12
14	10	15	14	32	10	15	14	9	13
15	10	19	20	5	10	19	19	42	14
16	10	23	25	37	10	23	25	14	15
17	10	27	31	10	10	27	30	47	16
18	11	1	36	43	11	1	36	20	17
19	11	5	42	15	11	5	41	51	18
20	11	9	47	48	11	9	47	24	19
21	11	13	53	20	11	13	52	56	20
22	11	17	58	53	11	17	58	29	21
23	11	22	4	26	11	22	4	2	22
24	11	26	9	58	11	26	9	34	23
25	0	0	15	31	0	0	15	7	24
26	0	4	21	3	0	4	20	38	25
27	0	8	26	36	0	8	26	11	26
28	0	12	32	9	0	13	31	44	27
29	0	16	37	41	0	16	37	16	28
30	0	20	43	14	0	20	42	49	29
31	0	24	48	45	0	24	48	20	30

JULY.

Common Year.	Longitude ☿.				Anomaly ☿.				Bissextile.
‖	S.	°	′	″	S.	°	′	″	‖
1	0	24	48	45	0	24	48	20	0
2	0	28	54	18	0	28	53	52	1
3	1	2	59	51	1	2	59	25	2
4	1	7	5	23	1	7	4	57	3
5	1	11	10	56	1	11	10	30	4
6	1	15	16	29	1	15	16	3	5
7	1	19	22	1	1	19	21	34	6
8	1	23	27	34	1	23	27	7	7
9	1	27	33	6	1	27	32	39	8
10	2	1	38	39	2	1	38	12	9
11	2	5	44	11	2	5	43	44	10
12	2	9	49	44	2	9	49	17	11
13	2	13	55	17	2	13	54	50	12
14	2	18	0	49	2	18	0	21	13
15	2	22	6	22	2	22	5	54	14
16	2	26	11	54	2	26	11	26	15
17	3	0	17	27	3	0	16	59	16
18	3	4	23	0	3	4	22	32	17
19	3	8	28	32	3	8	28	4	18
20	3	12	34	5	3	12	33	37	19
21	3	16	39	37	3	16	39	8	20
22	3	20	45	10	3	20	44	41	21
23	3	24	50	43	3	24	50	14	22
24	3	28	56	15	3	28	55	46	23
25	4	3	1	48	4	3	1	19	24
26	4	7	7	20	4	7	6	51	25
27	4	11	12	53	4	11	12	24	26
28	4	15	18	26	4	15	17	56	27
29	4	19	23	58	4	19	23	28	28
30	4	23	29	31	4	23	29	1	29
31	4	27	35	3	4	27	34	33	30

Common Year.	AUGUST.								Biſſextile.
	Longitude ☿.				Anomaly ☿.				
‖	S.	°	′	″	S.	°	′	″	‖
1	5	1	40	34	5	1	40	4	0
2	5	5	46	7	5	5	45	37	1
3	5	9	51	40	5	9	51	10	2
4	5	13	57	12	5	13	56	42	3
5	5	18	2	45	5	18	2	14	4
6	5	22	8	18	5	22	7	47	5
7	5	26	13	50	5	26	13	19	6
8	6	0	19	23	6	0	18	52	7
9	6	4	24	55	6	4	24	24	8
10	6	8	30	28	6	8	29	57	9
11	6	12	36	0	6	12	35	29	10
12	6	16	41	33	6	16	41	1	11
13	6	20	47	6	6	20	46	34	12
14	6	24	52	38	6	24	52	6	13
15	6	28	58	11	6	28	57	39	14
16	7	3	3	43	7	3	3	11	15
17	7	7	9	16	7	7	8	44	16
18	7	11	14	49	7	11	14	16	17
19	7	15	20	21	7	15	19	48	18
20	7	19	25	54	7	19	25	21	19
21	7	23	31	26	7	23	30	53	20
22	7	27	36	59	7	27	36	26	21
23	8	1	42	32	8	1	41	59	22
24	8	5	48	4	8	5	47	31	23
25	8	9	53	37	8	9	53	3	24
26	8	13	59	9	8	13	58	35	25
27	8	18	4	42	8	18	4	8	26
28	8	22	10	15	8	22	9	41	27
29	8	26	15	47	8	26	15	13	28
30	9	0	21	20	9	0	20	46	29
31	9	4	26	51	9	4	26	17	30

SEPTEMBER.

Common Year.	Longitude ☿.				Anomaly ☿.				Bissextile.
	S.	°	′	″	S.	°	′	″	
1	9	8	32	24	9	8	31	49	0
2	9	12	37	57	9	12	37	22	1
3	9	16	43	30	9	16	42	55	2
4	9	20	49	2	9	20	48	27	3
5	9	24	54	35	9	24	54	0	4
6	9	29	0	8	9	28	59	33	5
7	10	3	5	40	10	3	5	5	6
8	10	7	11	13	10	7	10	37	7
9	10	11	16	45	10	11	16	19	8
10	10	15	22	18	10	15	21	42	9
11	10	19	27	50	10	19	27	14	10
12	10	23	33	23	10	23	32	47	11
13	10	27	38	56	10	27	38	22	12
14	11	1	44	28	11	1	43	51	13
15	11	5	50	1	11	5	49	24	14
16	11	9	55	33	11	9	54	56	15
17	11	14	1	6	11	14	0	29	16
18	11	18	6	39	11	18	6	2	17
19	11	22	12	11	11	22	11	33	18
20	11	26	17	44	11	26	17	6	19
21	0	0	23	15	0	0	22	38	20
22	0	4	28	49	0	4	28	11	21
23	0	8	34	22	0	8	33	43	22
24	0	12	39	54	0	12	39	15	23
25	0	16	45	27	0	16	44	48	24
26	0	20	56	59	0	20	50	20	25
27	0	24	56	32	0	24	55	53	26
28	0	29	2	5	0	29	1	25	27
29	1	3	7	37	1	3	6	57	28
30	1	7	13	9	1	7	12	29	29
31	1	11	18	41	1	11	18	1	30

OCTOBER.

Common Year.	Longitude ☿. S.	°	′	″	Anomaly ☿. S.	°	′	″	Biſſextile.
1	1	11	18	41	1	11	18	1	0
2	1	15	24	13	1	15	23	33	1
3	1	19	29	46	1	19	29	6	2
4	1	23	35	18	1	23	34	38	3
5	1	27	40	51	1	27	40	10	4
6	2	1	46	24	2	1	45	43	5
7	2	5	51	56	2	5	51	15	6
8	2	9	57	29	2	9	56	48	7
9	2	14	3	1	2	14	2	20	8
10	2	18	18	34	2	18	7	53	9
11	2	21	14	6	2	22	13	25	10
12	2	26	19	39	2	26	18	57	11
13	3	0	25	12	3	0	24	30	12
14	3	4	30	44	3	4	30	2	13
15	3	8	36	17	3	8	35	45	14
16	3	12	41	49	3	12	41	7	15
17	3	16	47	22	3	16	46	40	16
18	3	20	52	55	3	20	52	13	17
19	3	24	58	27	3	24	57	44	18
20	3	29	4	0	3	29	3	17	19
21	4	3	9	32	4	3	8	49	20
22	4	7	15	5	4	7	14	22	21
23	4	11	20	38	4	11	19	55	22
24	4	15	26	10	4	15	25	27	23
25	4	19	31	43	4	19	31	0	24
26	4	23	37	15	4	23	36	32	25
27	4	27	42	48	4	27	42	4	26
28	5	1	48	21	5	1	47	37	27
29	5	5	53	53	5	5	53	9	28
30	5	9	59	25	5	9	58	42	29
31	5	14	4	58	5	14	4	14	30

NOVEMBER.

Common Year.	Longitude ☿.				Anomaly ☿.				Biſſextile.
	S.	°	′	″	S.	°	′	″	
1	5	18	10	30	5	18	9	46	0
2	5	22	16	3	5	22	15	19	1
3	5	26	21	36	5	26	20	51	2
4	6	0	27	8	6	0	26	23	3
5	6	4	32	41	6	4	31	56	4
6	6	8	38	14	6	8	37	29	5
7	6	12	43	46	6	12	43	1	6
8	6	16	49	19	6	16	48	34	7
9	6	20	54	51	6	20	54	6	8
10	6	25	0	24	6	24	59	38	9
11	6	29	5	56	6	29	5	10	10
12	7	3	11	29	7	3	10	43	11
13	7	7	17	2	7	7	16	16	12
14	7	11	22	34	7	11	21	48	13
15	7	15	28	7	7	15	27	21	14
16	7	19	33	39	7	19	32	53	15
17	7	23	39	12	7	23	38	26	16
18	7	27	44	45	7	27	43	58	17
19	8	1	50	17	8	1	49	30	18
20	8	5	55	50	8	5	55	3	19
21	8	10	1	22	8	10	0	35	20
22	8	14	16	55	8	14	16	8	21
23	8	18	12	28	8	18	11	41	22
24	8	22	18	0	8	22	17	12	23
25	8	26	23	33	8	26	22	45	24
26	9	0	29	5	9	0	28	17	25
27	9	4	34	38	9	4	33	50	26
28	9	8	40	11	9	8	39	23	27
29	9	12	45	43	9	12	44	55	28
30	9	16	51	15	9	16	50	27	29
31	9	20	56	47	9	20	55	58	30

Common Year.	DECEMBER.								*Biſſextile.*
	Longitude ☿.				Anomaly ☿.				
	S.	°	′	″	S.	°	′	″	
1	9	20	56	47	9	20	55	58	0
2	9	25	2	18	9	25	1	29	1
3	9	29	7	51	9	29	7	2	2
4	10	3	13	23	10	3	12	24	3
5	10	7	18	56	10	7	18	7	4
6	10	11	24	29	10	11	23	40	5
7	10	15	30	1	10	15	29	11	6
8	10	19	35	34	10	19	34	44	7
9	10	23	41	6	10	23	40	16	8
10	10	27	46	39	10	27	45	49	9
11	11	1	52	11	11	1	51	21	10
12	11	5	57	44	11	5	56	54	11
13	11	10	3	17	11	10	2	27	12
14	11	14	8	49	11	14	7	59	13
15	11	18	14	22	11	18	13	32	14
16	11	22	19	54	11	22	19	3	15
17	11	26	25	27	11	26	24	36	16
18	0	0	31	0	0	0	30	9	17
19	0	4	36	32	0	4	35	41	18
20	0	8	42	5	0	8	41	14	19
21	0	12	47	37	0	12	46	56	20
22	0	16	53	10	0	16	52	19	21
23	0	20	58	43	0	20	57	52	22
24	0	25	4	15	0	25	3	24	23
25	0	29	9	48	0	29	8	57	24
26	1	3	15	20	1	3	14	29	25
27	1	7	20	53	1	7	20	1	26
28	1	11	26	26	1	11	25	34	27
29	1	15	31	58	1	15	31	6	28
30	1	19	37	30	1	19	36	38	29
31	1	23	43	2	1	23	42	10	30

H.	Long. ♀.			Anom. ☿.			H.	Long. ♀.			Anom. ☿.		
	°	′	″	°	′	″		°	′	″	°	′	″
′	′	″	‴	′	″	‴	′	′	″	‴	′	″	‴
″	″	‴	⁗	″	‴	⁗	″	″	‴	⁗	″	‴	⁗
1	0	10	14	0	10	14	31	5	17	9	5	17	9
2	0	20	28	0	20	28	32	5	27	22	5	27	22
3	0	30	42	0	30	42	33	5	37	56	5	37	56
4	0	40	56	0	40	56	34	5	47	50	5	47	50
5	0	51	9	0	51	9	35	5	58	4	5	58	4
6	1	1	23	1	1	23	36	6	8	18	6	8	18
7	1	11	37	1	11	37	37	6	18	32	6	18	32
8	1	21	51	1	21	51	38	6	28	46	6	28	46
9	1	31	5	1	31	5	39	6	39	0	6	39	0
10	1	42	19	1	42	19	40	6	49	14	6	49	14
11	1	52	32	1	52	32	41	6	59	28	6	59	28
12	2	2	46	2	2	46	42	7	9	42	7	9	42
13	2	13	0	2	13	0	43	7	19	56	7	19	56
14	2	23	14	2	23	14	44	7	30	8	7	30	8
15	2	33	28	2	33	28	45	7	40	22	7	40	22
16	2	43	41	2	43	41	46	7	50	36	7	50	36
17	2	55	55	2	55	55	47	8	0	50	8	0	50
18	3	4	9	3	4	9	48	8	11	4	8	11	4
19	3	14	23	3	14	23	49	8	21	18	8	21	18
20	3	24	37	3	24	37	50	8	31	32	8	31	32
21	3	34	51	3	34	51	51	8	41	46	8	41	46
22	3	45	4	3	45	4	52	8	52	0	8	52	0
23	4	55	18	3	55	18	53	9	2	14	9	2	14
24	4	5	32	4	5	32	54	9	12	28	9	12	28
25	4	15	46	4	15	46	55	9	22	44	9	22	44
26	4	26	0	4	26	0	56	9	32	56	9	32	56
27	4	36	14	4	36	14	57	9	43	10	9	43	10
28	4	46	28	4	46	28	58	9	53	24	9	43	24
29	4	56	42	4	56	42	59	10	3	38	10	3	38
30	5	6	56	5	6	56	60	10	13	52	10	13	52

Mean Ano.	Sign 0 ſubtract.				Sign 1 ſubtract.				*Mean Ano.*
	Equation. °	′	″	Logar. ☿ à ☉.	Equation. °	′	″	*Logar.* ☿ *à* ☉.	
0	0	0	0	4.669131	9	35	33	4.662120	30
1	0	19	37	4 669123	9	53	48	4.661643	29
2	0	39	14	4.669100	10	11	58	4.661151	28
3	0	58	51	4.669061	10	30	2	4.660643	27
4	1	18	27	4.669006	10	48	0	4.660119	26
5	1	38	3	4.668936	11	5	52	4.659579	25
6	1	57	38	4.668851	11	23	37	4.659024	24
7	2	17	12	4.668750	11	41	15	4.658452	23
8	2	36	44	4.668633	11	58	47	4.657864	22
9	2	56	15	4.668501	12	16	12	4.657261	21
10	3	15	45	4.668353	12	33	30	4.656642	20
11	3	35	13	4.668190	12	50	40	4.656007	19
12	3	54	39	4.668012	13	7	42	4.655356	18
13	4	14	3	4.667817	13	24	37	4.654688	17
14	4	33	24	4.667607	13	41	24	4.654005	16
15	4	52	43	4.667382	13	58	2	4.653306	15
16	5	12	0	4.667141	14	14	32	4.652591	14
17	5	31	14	4.666884	14	30	53	4.651860	13
18	5	50	24	4.666612	14	47	6	4.651113	12
19	6	9	31	4.666324	15	3	9	4.650350	11
20	6	28	36	4.666020	15	19	3	4.649571	10
21	6	47	36	4.665701	15	34	47	4.648775	9
22	7	6	33	4.665365	15	50	21	4.647964	8
23	7	25	26	4.665014	16	5	45	4.647136	7
24	7	44	15	4.664648	16	20	59	4 646293	6
25	8	3	0	4.664266	16	36	2	4.645433	5
26	8	21	40	4 663868	16	50	55	4.644558	4
27	8	40	15	4.663455	17	5	37	4.643667	3
28	8	58	46	4.663026	17	20	8	4.642759	2
29	9	17	12	4.662581	17	34	27	4.641835	1
30	9	25	33	4.662120	17	48	34	4,640896	0

Sign 11 Add. Sign 10 Add.

Mean Ano.	Sign 2 ſubtract.				Sign 3 ſubtract.				*Mean Ano.*
	Equation.			*Logarithm* ☿ à ☉.	*Equation.*			*Logarithm* ☿ a ☉.	
	°	′	″		°	′	″		
0	17	48	34	4.640856	22	57	49	4.605378	30
1	18	2	29	4.639940	23	3	29	4.603961	29
2	18	16	11	4.638968	23	8	48	4.602530	28
3	18	29	41	4.637980	23	13	45	4.601085	27
4	18	42	58	4.636976	22	18	19	4.599627	26
5	18	56	2	4 635956	23	22	31	4.598155	25
6	19	8	53	4.634920	23	26	21	4.596671	24
7	19	21	30	4.633868	23	29	47	4.595174	23
8	19	33	53	4.632800	23	32	50	4.593364	22
9	19	46	3	4.631716	23	35	28	4.592142	21
10	19	57	58	4.630717	23	37	42	4.590608	20
11	20	9	37	4.629501	23	39	31	4.589062	19
12	20	21	2	4.628370	23	40	56	4.587505	18
13	20	32	11	4.627223	23	41	55	4.585937	17
14	20	43	5	4.626060	23	42	29	4.584358	16
15	20	53	43	4.624881	23	42	36	4.582768	15
16	21	4	5	4.623687	23	42	18	4.581168	14
17	21	14	10	4.622478	23	41	32	4.579558	13
18	21	23	58	4.621253	23	40	18	4.577939	12
19	21	33	30	4.620012	23	38	37	4.576311	11
20	21	42	44	4.618756	23	36	29	4.574675	10
21	21	51	39	4.617485	23	35	52	4.573030	9
22	22	0	16	4.616199	23	30	46	4 571378	8
23	22	8	36	4.614898	23	27	11	4.569719	7
24	22	16	37	4.613582	23	23	8	4.568053	6
25	22	24	19	4.612251	23	18	35	4.566381	5
26	22	31	41	4.610905	23	13	31	4.564704	4
27	22	38	43	4.609545	23	7	57	4.563022	3
28	22	45	25	4.608170	23	1	52	4.561335	2
29	22	51	47	4.606781	22	55	17	4.559643	1
30	22	57	49	4.605378	22	48	11	4.557951	0
	Sign 9 Add.				Sign 8 Add.				

Mean Ano.	Sign 4 ſubtract.				Sign 5 ſubtract.				*Mean Ano.*
	Equation.			*Logarithm* ☿ *à* ☉	*Equation.*			*Logarithm* ☿ *à* ☉	
	°	′	″		°	′	″		
0	22	48	11	4.557951	14	57	14	4.509939	30
1	22	40	33	4.556255	14	32	56	4.508606	29
2	22	32	22	4.554557	14	8	7	4.507302	28
3	22	23	40	4.552859	13	42	48	4.506030	27
4	22	14	25	4.551160	13	16	59	4.504791	26
5	22	4	38	4.549462	12	50	4	4.503586	25
6	21	54	18	4.547764	12	23	52	4.502416	24
7	21	43	25	4.546069	11	56	37	4.501283	23
8	21	31	59	4.544377	11	28	57	4.500186	22
9	21	19	59	4.542689	11	0	50	4.499129	21
10	21	7	25	4.541005	10	32	18	4.498113	20
11	20	54	17	4.539328	20	3	21	4.497137	19
12	20	40	35	4.537656	9	34	0	4.496204	18
13	20	26	20	4.535993	9	4	17	4.495314	17
14	20	11	31	4.534338	8	34	13	4.494470	16
15	19	56	8	4.532693	8	3	47	4.493671	15
16	19	40	9	4.531058	7	33	2	4.492919	14
17	19	23	36	4.529435	7	2	1	4.492215	13
18	19	2	29	4.527825	6	30	41	4.491557	12
19	18	48	48	4.526229	5	59	5	4.490950	11
20	18	30	32	4.524648	5	27	14	4.490393	10
21	18	11	43	4.523084	4	55	11	4.489887	9
22	17	52	20	4.521537	4	22	55	4.489432	8
23	17	32	23	4.520009	3	50	27	4.489092	7
24	17	11	52	4.518501	3	17	48	4.488679	6
25	16	50	47	4.517014	2	45	2	4.488382	5
26	16	29	9	4.515548	2	12	10	4.488138	4
27	16	6	59	4.514107	1	39	12	4.487948	3
28	15	44	16	4.512691	1	6	11	4.487813	2
29	15	21	1	4.511301	0	33	6	4.487732	1
30	14	57	14	4.509939	0	0	0	4.487704	0
	Sign 7 Add.				Sign 6 Add.				

A TABLE *of* Mercury's *Inclination, with the Reduction from his Orbit to the Ecliptic.*

Argument of Latitude. Reduction ſubtract.

	Si. 0 N. *Si.* 6 S. *Aſc.* Inclination.			*Subtrac.* *Reduct.*		*Si.* 1 S *Si.* 7 S *Aſc* Inclination.			*Subtrac.* *Reduct.*		
	°	′	″	′	″	°	′	″	′	″	
0	0	0	8	0	0	3	27	0	11	0	30
1	0	7	13	0	26	3	33	13	11	14	29
2	0	14	27	0	53	3	39	22	11	28	28
3	0	21	40	1	21	3	45	28	11	39	27
4	0	28	53	1	47	3	51	30	11	49	26
5	0	36	5	2	14	3	57	28	11	59	25
6	0	43	16	2	39	4	3	21	12	9	24
7	0	49	26	3	6	4	9	9	12	18	23
8	0	57	[illegible]	3	31	4	14	59	12	25	22
9	1	4	45	3	56	4	20	32	12	32	21
10	1	11	53	4	21	4	26	6	12	37	20
11	1	18	59	4	45	4	31	36	12	40	19
12	1	26	4	5	9	4	37	0	12	43	18
13	1	33	7	5	34	4	42	20	12	45	17
14	1	40	8	5	57	4	47	35	12	47	16
15	1	47	8	6	20	4	52	45	12	49	15
16	1	54	6	6	44	4	57	49	12	47	14
17	2	1	2	7	4	5	2	19	12	45	13
18	2	7	56	7	27	5	7	41	12	43	12
19	2	14	47	7	49	5	12	28	12	40	11
20	2	21	35	8	10	5	17	9	12	37	10
21	2	28	21	8	30	5	21	44	12	32	9
22	2	35	5	8	49	5	26	14	12	25	8
23	2	41	46	9	7	5	30	37	12	18	7
24	2	48	24	9	24	5	34	55	12	9	6
25	2	54	58	9	41	5	39	7	11	59	5
26	3	1	29	9	59	5	43	13	11	49	4
27	3	7	57	10	17	5	47	13	11	39	3
28	3	14	22	10	32	5	51	6	11	28	2
29	3	20	42	10	47	5	54	52	11	14	1
30	3	27	0	11	0	5	58	32	11	0	0
	Sign 11 S. *Sign* 5 N. *Deſc.*			*Reduct.* *Add.*		*Sign* 10 S. *Sign* 4 N. *Deſc.*			*Reduct.* *Add.*		

Argument of Latitude. Reduction Add.

Argument of Latitude. Reduction ſubtract.

	Sign 2 } *Aſc.* *Sign* 8 Inclination.			*Subtract.* *Reduct.*		
	°	′	″	′	″	
0	5	58	32	11	0	30
1	6	2	6	10	47	29
2	6	5	33	10	32	28
3	6	8	53	10	17	27
4	6	12	6	9	59	26
5	6	15	13	9	41	25
6	6	18	13	9	24	24
7	6	21	6	9	7	23
8	6	23	51	8	49	22
9	6	26	29	8	30	21
10	6	29	0	8	10	20
11	6	31	24	7	49	19
12	6	33	42	7	27	18
13	6	35	53	7	4	17
14	6	37	57	6	44	16
15	6	39	53	6	20	15
16	6	41	42	5	57	14
17	6	43	26	5	34	13
18	6	44	57	5	9	12
19	6	46	24	4	45	11
20	6	47	43	4	21	10
21	6	48	54	3	56	9
22	6	49	58	3	31	8
23	6	50	55	3	6	7
24	6	51	44	2	39	6
25	6	52	25	2	14	5
26	6	52	59	1	47	4
27	6	53	26	1	21	3
28	6	53	45	0	53	2
29	6	53	56	0	26	1
30	6	54	0	0	0	0
	Sign 9 } *Deſc.* *Sign* 3			*Reduct.* *Add.*		

Argument of Latitude. Reduction Add.

A TABLE *of* Venus's *Mean Motion in Years.*

Years compleat.	Longitude ♀. S.	°	′	″	Anomaly ♀. S.	°	′	″	Node ♀. S.	°	′	″
1	7	14	47	29	7	14	46	32	0	00	00	31
2	2	29	34	57	2	29	33	5	0	00	01	02
3	10	14	22	27	10	14	19	37	0	00	01	33
B 4	6	0	46	4	6	0	42	18	0	00	02	04
5	1	15	33	33	1	15	33	51	0	00	02	35
6	9	0	21	2	9	0	15	23	0	00	03	06
7	4	15	8	31	4	15	1	57	0	00	03	37
B 8	0	1	32	8	0	1	24	37	0	00	04	08
9	7	16	19	37	7	16	11	9	0	00	04	39
10	3	1	7	6	3	0	57	42	0	00	05	10
11	10	15	54	35	10	15	44	14	0	00	05	41
B 12	6	2	18	12	6	2	6	55	0	00	06	12
13	1	17	5	41	1	16	53	28	0	00	06	43
14	9	1	53	10	9	1	39	59	0	00	07	14
15	4	16	40	39	4	12	26	33	0	00	07	45
B 16	0	3	4	16	0	2	49	13	0	00	08	16
17	7	17	51	47	7	17	35	46	0	00	08	47
18	3	2	39	15	3	2	22	18	0	00	09	18
19	10	17	26	44	10	17	8	52	0	00	09	49
B 20	6	3	50	22	6	3	31	32	0	00	10	20
40	0	7	40	44	0	7	3	4	0	00	20	40
60	6	11	31	7	6	10	34	36	0	00	31	00
80	0	15	21	29	0	14	6	8	0	00	41	20
100	6	19	11	52	6	17	37	39	0	00	51	40
200	1	8	23	44	1	5	15	18	0	01	43	20
300	7	27	35	36	7	22	52	56	0	02	35	00
400	2	16	47	28	2	10	30	35	0	03	26	40
500	9	5	59	20	8	28	8	13	0	04	18	20
600	3	25	11	12	3	15	45	52	0	05	10	00
700	10	14	23	4	10	3	23	31	0	06	01	40
800	5	3	34	56	4	21	1	9	0	06	53	20
900	11	22	46	48	11	8	38	48	0	07	45	00
1000	6	11	58	40	5	26	16	26	0	08	36	40
2000	0	23	57	20	11	22	32	52	0	17	13	20
3000	7	5	56	0	5	18	49	18	0	25	50	00
4000	1	17	54	4	11	15	5	44	1	04	26	40

Years of Christ.	Longitude ♀.				Anomaly ♀.				Node ♀.			
	S.	°	′	″	S.	°	′	″	S.	°	′	″
1	1	13	35	19	4	3	44	35	1	29	20	4
101	8	2	47	11	10	21	22	14	2	0	11	44
201	2	21	59	3	5	8	59	53	2	1	3	24
301	9	11	10	55	11	26	37	32	2	1	55	4
401	4	0	22	47	6	14	15	11	2	2	46	44
501	10	19	34	39	1	1	52	50	2	3	38	24
601	5	8	46	31	7	19	30	29	2	4	30	4
701	11	27	58	23	2	7	8	8	2	5	21	44
801	6	17	10	15	8	24	45	47	2	6	13	24
901	1	6	22	7	3	12	23	26	2	7	5	4
1001	7	25	33	59	10	0	1	5	2	7	56	44
1101	2	14	45	51	4	17	38	44	2	8	48	24
1201	9	5	57	43	11	5	16	23	2	9	40	4
1301	3	23	9	35	5	22	54	2	2	10	31	44
1401	10	12	21	27	0	10	31	41	2	11	23	24
1501	5	1	33	19	6	28	9	20	2	12	15	4
1601	11	20	45	11	1	15	46	59	2	13	6	44
1701	6	9	57	3	8	3	24	38	2	13	58	24
1801	0	29	8	55	2	21	2	17	2	14	50	4
1901	7	18	20	47	9	8	39	56	2	15	41	44
2001	2	7	32	39	3	26	17	35	2	16	33	24
1678	1	20	8	9	3	13	57	21	2	13	46	31
1679	9	4	55	37	10	28	43	53	2	13	47	2
1680	4	19	43	5	6	13	30	26	2	13	47	33
1681	0	6	6	41	1	29	53	6	2	13	48	44
1682	7	20	54	10	9	14	39	38	2	13	48	35
1683	3	5	41	39	4	29	26	11	2	13	49	6
1684	10	20	29	8	0	14	12	43	2	13	49	37
1685	6	6	52	45	8	0	35	24	2	13	50	8
1686	1	21	40	14	3	15	21	56	2	13	50	39
1687	9	6	27	43	11	0	8	29	2	13	51	10
1688	4	21	15	12	6	14	55	1	2	13	51	41
1689	0	7	38	49	2	1	17	42	2	13	52	12
1690	7	22	26	18	9	16	4	15	2	13	52	43
1691	3	7	13	47	5	0	50	47	2	13	53	14
1692	10	22	1	16	0	15	37	19	2	13	54	45

Years of Chriſt	Longitude ♀.				Anomaly ♀.				Node ♀.			
	S.	°	′	″	S.	°	′	″	S.	°	′	″
1693	06	08	24	53	08	02	00	00	2	13	54	16
1694	01	23	12	22	03	16	46	32	2	13	54	47
1695	09	07	59	51	11	01	33	05	2	13	55	18
1696	04	22	47	20	06	16	19	37	2	13	55	49
1697	00	09	10	57	02	02	42	18	2	13	56	20
1698	07	23	58	26	09	17	28	50	2	13	56	51
1699	03	08	45	55	05	02	15	23	2	13	57	22
1700	10	23	33	24	00	17	01	56	2	13	57	53
1701	06	09	57	03	08	03	24	38	2	13	58	24
1702	07	24	44	32	03	13	11	10	2	13	58	55
1703	09	09	32	01	11	02	57	43	2	13	59	26
1704	10	24	19	30	06	17	44	15	2	13	59	57
1705	00	10	43	07	02	04	06	56	2	14	00	28
1706	01	25	30	36	09	18	53	28	2	14	00	59
1707	03	10	18	05	05	03	40	01	2	14	01	30
1708	04	25	05	34	00	18	26	33	2	14	02	01
1709	06	11	29	11	08	04	49	14	2	14	02	32
1710	07	26	16	41	03	19	35	46	2	14	03	03
1711	09	11	04	10	11	04	22	19	2	14	03	34
1712	10	25	51	39	06	19	08	51	2	14	04	05
1718	00	12	15	16	02	05	31	32	2	14	04	36
1714	01	27	02	45	09	20	18	04	2	14	05	07
1715	03	11	50	14	05	05	04	37	2	14	05	38
1716	04	26	37	43	00	19	51	09	2	14	06	09
1717	06	13	01	20	08	06	13	50	2	14	06	40
1718	07	27	48	49	03	21	00	22	2	14	07	11
1719	09	12	36	18	11	05	46	55	2	14	07	42
1720	04	27	23	48	06	20	33	29	2	14	08	13
1721	00	13	47	25	02	06	56	10	2	14	08	44
1722	07	28	34	54	09	21	42	42	2	14	09	15
1723	03	13	22	24	05	06	29	15	2	14	09	46
1724	10	28	09	53	00	21	15	47	2	14	10	17
1725	06	14	33	30	08	07	38	28	2	14	10	48
1726	01	29	20	59	03	22	25	00	2	14	11	19
1727	09	14	08	28	11	07	11	33	2	14	11	50
1728	04	28	55	57	06	21	58	06	2	14	12	21

Years of Chriſt.	Longitude ♀. S.	°	′	″	Anomaly ♀. S.	°	′	″	Node ♀. S.	°	′	″
1729	00	15	19	34	02	08	20	46	2	14	12	52
1730	08	00	07	03	09	23	07	19	2	14	13	23
1731	03	14	54	32	05	07	53	52	2	14	13	54
1732	10	29	42	01	00	22	40	24	2	14	14	25
1733	06	16	05	38	08	09	03	05	2	14	14	56
1734	02	00	53	07	03	23	49	37	2	14	15	27
1735	09	15	40	36	11	08	36	10	2	14	15	58
1736	05	00	28	05	06	23	22	42	2	14	16	29
1737	00	16	51	42	02	09	45	23	2	14	17	00
1738	08	01	39	11	09	24	31	55	2	14	17	31
1739	03	16	26	40	05	09	18	28	2	14	18	02
1740	11	01	14	09	00	24	05	01	2	14	18	33
1741	06	17	37	47	08	10	27	42	2	14	19	04
1742	02	02	25	16	03	25	14	14	2	14	19	35
1743	09	17	12	45	11	10	00	47	2	14	20	06
1744	05	02	00	14	06	24	47	19	2	14	20	37
1745	00	18	23	51	02	11	10	00	2	14	21	08
1746	08	03	11	20	09	25	56	32	2	14	21	39
1747	03	17	58	49	05	10	43	05	2	14	22	10
1748	11	02	46	18	00	25	29	37	2	14	22	41
1749	06	19	09	55	08	11	52	18	2	14	23	12
1750	02	03	57	25	03	26	38	51	2	14	23	43
1751	09	18	44	54	11	11	25	24	2	11	24	14
1752	05	03	32	23	06	26	11	56	2	14	24	45
1753	00	19	56	00	02	12	34	37	2	14	25	16
1754	08	04	43	29	09	27	21	09	2	14	25	47
1755	03	19	30	58	05	12	07	42	2	14	26	18
1756	11	04	18	27	00	26	54	14	2	14	26	49
1757	06	20	42	04	08	13	16	55	2	14	27	20
1758	02	05	29	32	03	28	03	27	2	14	27	51
1759	09	20	17	02	11	12	50	00	2	14	28	22
1760	05	05	04	31	06	27	36	32	2	14	28	53
1761	00	21	28	09	02	13	59	14	2	14	29	24
1762	08	06	15	38	09	28	45	46	2	14	29	55
1763	03	21	03	07	05	13	32	19	2	14	30	26
1764	11	05	50	36	00	28	18	51	2	14	30	57

Years of	Longitude ♀.				Anomaly ♀.				Node ♀.			
Chriſt.	S.	°	′	″	S.	°	′	″	S.	°	′	″
1765	6	22	14	13	8	14	41	32	2	14	31	28
1766	2	7	1	42	3	29	28	4	2	14	31	59
1767	9	21	49	11	11	14	14	37	2	14	32	30
1768	5	6	36	40	6	29	1	9	2	14	33	1
1769	0	23	0	17	2	15	23	50	2	14	33	32
1770	8	7	47	47	10	0	10	23	2	14	34	3
1771	3	22	35	16	5	14	56	56	2	14	34	34
1772	11	7	22	45	0	29	43	28	2	14	35	5
1773	6	23	46	22	8	16	6	9	2	14	35	36
1774	2	8	33	51	4	0	52	41	2	14	36	7
1775	9	23	21	20	11	15	39	14	2	14	36	38
1776	5	8	8	49	7	0	25	46	2	14	37	9
1777	0	24	32	26	2	16	48	27	2	14	37	40
1778	8	9	19	55	10	1	34	59	2	14	38	11
1779	3	24	7	24	5	16	21	32	2	14	38	42
1780	11	8	54	53	1	1	8	4	2	14	39	13
1781	6	25	18	31	8	17	30	46	2	14	39	44
1782	2	10	6	0	4	2	17	18	2	14	40	15
1783	9	24	53	29	11	17	3	51	2	14	40	46
1784	5	9	40	58	7	1	50	23	2	14	41	17
1785	0	26	4	35	2	18	13	4	2	14	41	48
1786	8	10	52	4	10	2	59	36	2	14	42	19
1787	3	25	39	33	5	17	46	9	2	14	42	50
1788	11	10	27	2	1	2	32	41	2	14	43	21
1789	6	26	50	39	8	18	55	22	2	14	43	52
1790	2	11	38	8	4	3	41	54	2	14	44	23
1791	9	26	25	38	11	18	28	28	2	14	44	54
1792	5	11	13	7	7	3	15	0	2	14	45	25
1793	0	27	36	44	2	19	37	41	2	14	45	56
1794	8	12	24	13	10	14	24	13	2	14	46	27
1795	3	27	11	42	5	19	10	46	2	14	46	58
1796	11	11	59	11	1	3	57	18	2	14	47	29
1797	6	28	22	48	8	20	19	59	2	14	48	00
1798	2	13	10	17	4	5	6	31	2	14	48	31
1799	9	27	57	46	11	19	53	4	2	14	49	2
1800	5	12	45	15	7	4	39	36	2	14	49	33

Years of Christ.	Longitude ♀.				Anomaly ♀.				Node ♀.			
	S.	°	′	″	S.	°	′	″	S.	°	′	″
1801	0	29	8	53	2	21	2	18	2	14	50	4
1802	8	13	56	22	10	15	48	50	2	14	50	35
1803	3	28	43	51	5	20	35	23	2	14	51	6
1804	11	19	31	20	1	5	21	55	2	14	51	37
1805	6	29	54	57	8	21	44	36	2	14	52	8
1806	2	14	42	26	4	6	31	8	2	14	52	39
1807	9	29	29	55	11	21	17	41	2	14	53	10
1808	5	14	17	24	7	6	4	13	2	14	53	41
1809	1	0	41	1	2	22	26	54	2	14	54	12
1810	8	15	28	31	10	7	13	27	2	14	54	43
1811	4	0	16	0	5	22	0	0	2	14	55	14
1812	11	15	3	29	1	6	46	32	2	14	55	45
1813	7	1	27	6	8	23	9	13	2	14	56	16
1814	2	16	14	35	4	7	55	45	2	14	56	47
1815	10	1	2	4	11	22	42	18	2	14	57	18
1816	5	15	49	33	7	7	28	50	2	14	57	49
1817	1	2	13	10	2	23	51	31	2	14	58	20
1818	8	17	0	39	10	8	38	3	2	14	58	51
1819	4	1	48	8	5	23	24	36	2	14	59	22
1820	11	16	35	37	1	8	11	8	2	14	59	53
1821	7	2	59	15	8	24	33	50	2	15	0	24
1822	2	17	46	44	4	9	20	22	2	15	0	55
1823	10	2	34	13	11	24	6	55	2	15	1	26
1824	5	17	21	42	7	8	53	27	2	15	1	57
1825	1	3	35	19	2	25	16	8	2	15	2	28
1826	8	18	32	48	10	10	2	40	2	15	2	59
1827	4	3	20	17	5	24	49	13	2	15	3	30
1828	11	18	7	46	1	9	35	45	2	15	4	1
1829	7	4	31	23	8	25	58	26	2	15	4	32
1830	2	19	18	52	4	10	44	58	2	15	5	3
1831	10	4	6	21	11	25	31	32	2	15	5	34
1832	5	18	53	50	7	10	18	4	2	15	6	5
1833	1	5	17	27	2	26	40	55	2	15	6	36
1834	8	20	4	56	10	11	27	27	2	15	7	7
1835	4	4	52	25	5	26	13	50	2	15	7	38
1836	11	19	39	54	1	11	0	23	2	15	8	9

JANUARY.

Common Year.	Longitude ♀.				Anomaly ♀.				Biſſextile.
	S.	°	′	″	S.	°	′	″	
1	0	01	36	08	0	01	36	08	0
2	0	03	12	16	0	03	12	16	1
3	0	04	48	23	0	04	48	23	2
4	0	06	24	31	0	06	24	31	3
5	0	08	00	39	0	08	00	39	4
6	0	09	36	47	0	09	36	47	5
7	0	11	12	55	0	11	12	54	6
8	0	12	49	02	0	12	49	01	7
9	0	14	25	10	0	14	25	09	8
10	0	16	1	18	0	16	01	17	9
11	0	17	37	26	0	17	37	25	10
12	0	19	13	34	0	19	13	33	11
13	0	20	49	42	0	20	49	41	12
14	0	22	25	49	0	22	25	48	13
15	0	24	01	57	0	24	01	55	14
16	0	25	48	05	0	25	38	03	15
17	0	27	14	13	0	27	14	11	16
18	0	28	50	21	0	28	50	19	17
19	1	00	24	28	1	00	26	26	18
20	1	02	02	36	1	02	02	34	19
21	1	03	38	44	1	03	38	42	20
22	1	05	14	52	1	05	14	50	21
23	1	06	51	00	1	06	50	57	22
24	1	08	27	07	1	08	27	04	23
25	1	10	03	15	1	10	03	12	24
26	1	11	39	23	1	11	39	20	25
27	1	13	15	31	1	13	15	27	26
28	1	14	51	39	1	14	51	35	27
29	1	16	27	47	1	16	27	47	28
30	1	18	03	54	1	18	03	50	29
31	1	19	40	02	1	19	39	58	30

FEBRUARY.

Common Year.	Longitude ♀.				Anmaly ♀.				Bissextile.
	S.	°	'	"	S.	°	'	"	
1	1	21	16	10	1	21	16	6	0
2	1	22	52	18	1	22	52	14	1
3	1	24	28	26	1	24	28	21	2
4	1	26	4	33	1	26	4	28	3
5	1	27	40	41	1	27	40	36	4
6	1	29	16	49	1	29	16	44	5
7	2	0	52	57	2	0	52	52	6
8	2	2	29	4	2	2	28	59	7
9	2	4	5	12	2	4	5	7	8
10	2	5	41	20	2	5	41	15	9
11	2	7	17	28	2	7	17	22	10
12	2	8	53	36	2	8	23	30	11
13	2	10	29	44	2	10	29	38	12
14	2	12	5	51	2	12	5	45	13
15	2	13	41	59	2	13	41	53	14
16	2	15	18	7	2	15	18	0	15
17	2	16	54	15	2	16	54	8	16
18	2	18	30	23	2	18	30	16	17
19	2	20	6	30	2	20	6	23	18
20	2	21	42	38	2	21	42	31	19
21	2	23	18	46	2	23	18	39	20
22	2	24	54	54	2	24	54	47	21
23	2	26	31	2	2	26	30	55	22
24	2	28	7	9	2	28	7	2	23
25	2	29	43	17	2	29	43	9	24
26	3	1	19	25	3	1	19	17	25
27	3	2	55	33	3	2	55	25	26
28	3	4	31	41	3	4	31	33	27
29	3	6	7	49	3	6	7	41	28
30									29
31									30

Common Year.	MARCH.								Bissextile.
	Longitude ♀.				Anomaly ♀.				
	S.	°	'	"	S.	°	'	"	
1	3	6	7	49	3	6	7	41	0
2	3	7	43	57	3	7	43	48	1
3	3	9	20	4	3	9	19	55	2
4	3	10	56	12	3	10	56	3	3
5	3	12	32	20	3	12	32	11	4
6	3	14	8	28	3	14	8	19	5
7	3	15	44	36	3	15	44	27	6
8	3	17	20	43	3	17	20	34	7
9	3	18	56	51	3	18	56	42	8
10	3	20	32	59	3	20	32	49	9
11	3	22	9	7	3	22	8	57	10
12	3	23	45	15	3	23	45	5	11
13	3	25	21	23	3	25	21	13	12
14	3	26	57	30	3	26	57	20	13
15	3	28	33	38	3	28	33	28	14
16	4	0	9	46	4	0	9	36	15
17	4	1	45	54	4	1	45	44	16
18	4	3	22	2	4	3	21	51	17
19	4	4	58	9	4	4	57	58	18
20	4	6	34	17	4	6	34	6	19
21	4	8	10	25	4	8	10	14	20
22	4	9	46	33	4	9	46	22	21
23	4	11	22	41	4	11	22	30	22
24	4	12	58	48	4	12	58	37	23
25	4	14	34	56	4	14	34	44	24
26	4	16	11	4	4	16	10	52	25
27	4	17	47	12	4	17	47	0	26
28	4	19	23	20	4	19	23	8	27
29	4	20	59	28	4	20	59	16	28
30	4	22	35	35	4	22	35	23	29
31	4	24	11	43	4	24	11	31	30

APRIL.

Common Year. ‖	Longitude ♀.				Anomaly ♀.				Bissextile. ‖
	S.	°	′	″	S.	°	′	″	
1	4	25	47	51	4	25	47	37	0
2	4	27	23	59	4	27	23	45	1
3	4	29	0	6	4	28	59	52	2
4	5	0	36	14	5	0	36	0	3
5	5	2	12	22	5	2	12	8	4
6	5	3	48	30	5	3	48	16	5
7	5	5	24	38	5	5	24	24	6
8	5	7	0	45	5	7	0	31	7
9	5	8	36	53	5	8	36	39	8
10	5	10	13	1	5	10	12	46	9
11	5	11	49	9	5	11	48	54	10
12	5	13	25	17	5	13	25	2	11
13	5	15	1	25	5	15	1	10	12
14	5	16	37	32	5	16	37	17	13
15	5	18	13	40	5	18	13	25	14
16	5	19	49	48	5	19	49	33	15
17	5	21	25	56	5	21	25	41	16
18	5	23	2	4	5	23	1	48	17
19	5	24	38	11	5	24	37	55	18
20	5	26	14	19	5	26	14	3	19
21	5	27	50	27	5	27	50	11	20
22	5	29	26	35	5	29	26	19	21
23	6	1	2	43	6	1	2	27	22
24	6	2	38	50	6	2	38	34	23
25	6	4	14	58	6	4	14	41	24
26	6	5	51	6	6	5	50	49	25
27	6	7	27	14	6	7	26	57	26
28	6	9	3	22	6	9	3	5	27
29	6	10	39	30	6	10	39	12	28
30	6	12	15	37	6	12	15	19	29
31	6	13	51	45	6	13	51	27	30

M A Y.

Common Year.	Longitude ♀.				Anomaly ♀.				Biſſextile.
	S.	°	′	″	S.	°	′	″	
1	6	13	51	45	6	13	51	27	0
2	6	15	27	53	6	15	27	35	1
3	6	17	4	0	6	17	3	42	2
4	6	18	40	8	6	18	39	50	3
5	6	20	16	16	6	20	15	58	4
6	6	21	52	24	6	21	52	5	5
7	6	23	28	32	6	23	28	13	6
8	6	25	4	39	6	25	4	20	7
9	6	26	40	47	6	26	40	28	8
10	6	28	16	55	6	28	16	36	9
11	6	29	53	3	6	29	52	44	10
12	7	1	29	11	7	1	28	52	11
13	7	3	5	19	7	3	5	0	12
14	7	4	41	26	7	4	4	7	13
15	7	6	17	34	7	6	17	14	14
16	7	7	53	42	7	7	53	22	15
17	7	9	29	50	7	9	29	30	16
18	7	11	5	58	7	11	5	38	17
19	7	12	42	5	7	12	41	45	18
20	7	14	18	13	7	14	17	52	19
21	5	15	54	21	7	15	54	0	20
22	7	17	30	29	7	17	30	8	21
23	7	19	6	37	7	19	6	16	22
24	7	20	42	44	7	20	42	23	23
25	7	22	18	52	7	22	18	31	24
26	7	23	55	0	7	23	54	39	25
27	7	25	31	8	7	25	30	46	26
28	7	27	7	16	7	27	6	54	27
29	7	28	43	24	7	28	43	2	28
30	8	0	19	31	8	0	19	9	29
31	8	1	55	39	8	1	55	17	30

JUNE.

Common Year.	Longitude ♀.				Anomaly ♀.				Biſſextile.
	S.	°	′	″	S.	°	′	″	
1	8	3	31	47	8	3	31	25	0
2	8	5	7	55	8	5	7	32	1
3	8	6	44	2	8	6	43	39	2
4	8	8	20	10	8	8	19	47	3
5	8	9	56	18	8	9	55	55	4
6	8	11	32	26	8	11	32	3	5
7	8	13	8	34	8	13	8	11	6
8	8	14	44	41	8	14	44	18	7
9	8	16	20	49	8	16	20	26	8
10	8	17	56	57	8	17	56	33	9
11	8	19	33	5	8	19	32	41	10
12	8	21	9	13	8	21	8	49	11
13	8	22	45	21	8	22	44	57	12
14	8	24	21	28	8	24	21	4	13
15	8	25	57	36	8	25	57	12	14
16	8	27	33	44	8	27	33	20	15
17	8	29	9	52	8	29	9	28	16
18	9	0	46	0	9	0	45	36	17
19	9	2	22	7	9	2	21	43	18
20	9	3	58	17	9	3	57	50	19
21	9	5	34	23	9	5	33	58	20
22	9	7	10	31	9	7	10	6	21
23	9	8	46	39	9	8	46	14	22
24	9	10	22	46	9	10	22	21	23
25	9	11	58	54	9	11	58	28	24
26	9	13	35	2	9	13	34	36	25
27	9	15	11	10	9	15	10	44	26
28	9	16	47	18	9	16	46	52	27
29	9	18	23	26	9	18	23	0	28
30	9	19	59	33	9	19	59	7	29
31	9	21	35	41	9	21	35	14	30

Common Year.	J U L Y.								Biſſextile.
	Longitude ♀.				Anomaly ♀.				
	S.	°	′	″	S.	°	′	″	
1	9	21	35	41	9	21	35	14	0
2	9	23	11	49	9	23	11	21	1
3	9	24	47	56	9	24	47	28	2
4	9	26	24	4	9	26	23	36	3
5	9	28	0	12	9	27	59	44	4
6	9	29	36	20	9	29	35	52	5
7	10	1	12	28	10	1	12	0	6
8	10	2	48	35	10	2	48	7	7
9	10	4	24	43	10	4	24	14	8
10	10	6	0	51	10	6	0	22	9
11	10	7	36	59	10	7	36	30	10
12	10	9	13	7	10	9	12	38	11
13	10	10	49	15	10	10	48	46	12
14	10	12	25	22	10	12	24	53	13
15	10	14	1	30	10	14	1	0	14
16	10	15	37	38	10	15	37	8	15
17	10	17	13	46	10	17	13	16	16
18	10	18	49	54	10	18	49	24	17
19	10	20	26	1	10	20	25	31	18
20	10	22	2	9	10	22	1	39	19
21	10	23	38	17	10	23	37	46	20
22	10	25	14	25	10	25	13	54	21
23	10	26	50	33	10	26	50	2	22
24	10	28	26	40	10	28	26	9	23
25	11	0	2	48	11	0	2	17	24
26	11	1	38	56	11	1	38	25	25
27	11	3	15	4	11	3	14	33	26
28	11	4	51	12	11	4	50	40	27
29	11	6	27	20	11	6	26	48	28
30	11	8	3	27	11	8	2	55	29
31	11	9	39	35	11	9	39	3	30

AUGUST.

Common Year.	Longitude ♀.				Anomaly ♀.				Biſſextile.
	S.	°	′	″	S.	°	′	″	
1	11	11	15	43	11	11	15	11	0
2	11	12	51	51	11	12	51	19	1
3	11	14	27	58	11	14	27	26	2
4	11	16	4	6	11	16	3	33	3
5	11	17	40	14	11	17	39	41	4
6	11	19	16	22	11	19	15	49	5
7	11	20	52	30	11	20	51	57	6
8	11	22	28	37	11	22	28	4	7
9	11	24	4	45	11	24	4	12	8
10	11	25	40	53	11	25	40	20	9
11	11	27	17	1	11	27	16	27	10
12	11	28	53	9	11	28	52	35	11
13	0	0	29	17	0	0	28	43	12
14	0	2	5	24	0	2	4	50	13
15	0	3	41	32	0	3	40	58	14
16	0	5	17	40	0	5	17	6	15
17	0	6	53	48	0	6	53	14	16
18	0	8	29	56	0	8	29	21	17
19	0	10	6	3	0	10	5	28	18
20	0	11	42	11	0	11	41	36	19
21	0	13	18	19	0	13	17	44	20
22	0	14	54	27	0	14	53	52	21
23	0	16	30	35	0	16	30	0	22
24	0	18	6	42	0	18	6	7	23
25	0	19	42	50	0	19	46	14	24
26	0	21	18	58	0	21	18	22	25
27	0	22	55	6	0	22	54	30	26
28	0	24	31	14	0	24	30	38	27
29	0	26	7	22	0	26	6	46	28
30	0	27	43	29	0	27	42	53	29
31	0	29	19	37	0	29	19	1	30

SEPTEMBER.

Common Year.	Longitude ♀.				Anomaly ♀.				Bissextile.
	S.	°	′	″	S	°	′	″	
1	1	0	55	45	1	0	55	8	0
2	1	1	31	53	1	1	31	16	1
3	1	4	8	0	1	4	7	23	2
4	1	5	44	8	1	5	43	31	3
5	1	7	20	16	1	7	19	39	4
6	1	8	56	24	1	8	55	47	5
7	1	10	32	32	1	10	31	55	6
8	1	12	8	39	1	12	8	2	7
9	1	13	44	47	1	13	44	10	8
10	1	15	20	55	1	15	20	17	9
11	1	16	57	3	1	16	56	25	10
12	1	18	33	11	1	18	32	33	11
13	1	20	9	19	1	20	8	41	12
14	1	21	45	26	1	21	44	48	13
15	1	23	21	34	1	23	20	56	14
16	1	24	57	42	1	24	57	3	15
17	1	26	33	50	1	26	33	11	16
18	1	28	9	58	1	28	9	19	17
19	1	29	46	5	1	29	45	26	18
20	2	1	22	13	2	1	21	34	19
21	2	2	58	21	2	2	57	46	20
22	2	4	34	29	2	4	33	49	21
23	2	6	10	37	2	6	9	57	22
24	2	7	46	44	2	7	46	4	23
25	2	9	22	52	2	9	22	12	24
26	2	10	59	0	2	10	58	20	25
27	2	12	35	8	2	12	34	28	26
28	2	14	11	16	2	14	10	36	27
29	2	15	47	24	2	15	46	43	28
30	2	17	23	31	2	17	22	50	29
31	2	18	59	39	2	18	58	58	30

OCTOBER.

Common Year.	Longitude ♀.				Anomaly ♀.				Biſſextile.
	S.	°	′	″	S.	°	′	″	
1	2	18	59	39	2	18	58	58	0
2	2	20	35	47	2	20	35	5	1
3	2	22	11	54	2	22	11	12	2
4	2	23	48	2	2	23	47	20	3
5	2	25	24	10	2	25	23	28	4
6	2	27	0	18	2	26	59	35	5
7	2	28	36	26	2	28	35	43	6
8	3	0	12	33	3	0	11	50	7
9	3	1	48	41	3	1	47	58	8
10	3	3	24	49	3	3	24	6	9
11	3	5	0	57	3	5	0	14	10
12	3	6	37	5	3	6	36	22	11
13	3	8	13	13	3	8	12	29	12
14	3	9	49	20	3	9	48	36	13
15	3	11	25	28	3	11	24	44	14
16	3	13	1	36	3	13	0	52	15
17	3	14	37	44	3	14	37	0	16
18	3	16	13	52	3	16	13	8	17
19	3	17	49	59	3	17	49	15	18
20	3	19	26	7	3	19	25	22	19
21	3	21	2	15	3	21	1	30	20
22	3	22	38	23	3	22	37	38	21
23	3	24	14	31	3	24	13	46	22
24	3	25	50	38	3	25	49	53	23
25	3	27	26	46	3	27	26	1	24
26	3	29	2	54	3	29	2	9	25
27	4	0	39	2	4	0	38	16	26
28	4	2	15	10	4	2	14	24	27
29	4	3	51	18	4	3	50	32	28
30	4	5	27	25	4	5	26	39	29
31	4	7	3	33	4	7	2	47	30

NOVEMBER.

Common Year.	Longitude ♀.				Anomaly ♀.				Bissextile.
‖	S.	°	′	″	S.	°	′	″	‖
1	4	08	39	41	4	08	38	55	0
2	4	10	15	49	4	10	15	03	1
3	4	11	21	56	4	11	21	10	2
4	4	13	28	04	4	13	27	17	3
5	4	15	04	12	4	15	03	25	4
6	4	16	40	20	4	16	39	33	5
7	4	18	16	28	4	18	15	41	6
8	4	19	52	35	4	19	51	48	7
9	4	21	28	43	4	21	27	56	8
10	4	23	04	51	4	23	04	04	9
11	4	24	40	59	4	24	40	12	10
12	4	26	17	07	4	26	16	19	11
13	4	27	53	15	4	27	52	27	12
14	4	29	49	22	4	29	48	34	13
15	5	01	05	30	5	01	04	42	14
16	5	02	41	38	5	02	40	50	15
17	5	04	17	46	5	04	16	58	16
18	5	05	53	54	5	05	53	06	17
19	5	07	30	01	5	07	29	13	18
20	5	09	06	09	5	09	05	21	19
21	5	10	42	17	5	10	41	28	20
22	5	12	18	25	5	12	17	36	21
23	5	13	54	33	5	13	53	44	22
24	5	15	30	40	5	15	29	51	23
25	5	17	06	48	5	17	05	59	24
26	5	18	42	57	5	18	42	07	25
27	5	20	19	04	5	20	18	14	26
28	5	21	55	12	5	21	54	22	27
29	5	23	31	20	5	23	30	30	28
30	5	25	07	27	5	25	06	37	29
31	5	26	43	35	5	26	42	44	30

Common Year.	DECEMBER.								Bissextile.
	Longitude ♀.				Anomaly ♀.				
	S.	°	′	″	S.	°	′	″	
1	5	26	43	35	5	26	42	44	0
2	5	28	19	43	5	28	18	52	1
3	5	29	55	50	5	29	54	59	2
4	6	1	31	58	6	1	31	7	3
5	6	3	8	6	6	3	7	15	4
6	6	4	44	14	6	4	43	23	5
7	6	6	20	22	6	6	19	31	6
8	6	7	56	29	6	7	55	38	7
9	6	9	32	37	6	9	31	45	8
10	6	11	8	45	6	11	7	53	9
11	6	12	44	53	6	12	44	1	10
12	6	14	21	1	6	14	20	9	11
13	6	15	57	9	6	15	56	17	12
14	6	17	33	16	6	17	32	24	13
15	6	19	9	24	6	19	8	31	14
16	6	20	45	32	6	20	44	39	15
17	6	22	21	40	6	22	20	47	16
18	6	23	57	48	6	23	56	55	17
19	6	25	33	55	6	25	33	2	18
20	6	27	10	3	6	27	9	10	19
21	6	28	46	11	6	28	45	18	20
22	7	0	22	19	7	0	21	25	21
23	7	1	58	27	7	1	57	33	22
24	7	3	34	34	7	3	33	40	23
25	7	5	10	42	7	5	9	48	24
26	7	6	46	50	7	6	45	56	25
27	7	8	22	58	7	8	22	4	26
28	7	9	59	6	7	9	58	11	27
29	7	11	35	14	7	11	34	19	28
30	7	13	11	21	7	13	10	26	29
31	7	14	47	29	7	14	46	33	30

H.	Long. ♀.			Anom. ♀.			H.	Long. ♀.			Anom. ♀.		
	°	′	″	°	′	″		°	′	″	°	′	″
′	′	″	‴	′	″	‴	′	′	″	‴	′	″	‴
″	″	‴	⁗	″	‴	⁗	″	″	‴	⁗	″	‴	⁗
1	0	04	00	0	04	00	31	2	04	10	2	04	10
2	0	08	01	0	08	01	32	2	08	11	7	08	11
3	0	12	01	0	12	01	33	2	12	11	2	12	11
4	0	16	01	0	16	01	34	2	16	11	2	16	11
5	0	20	02	0	20	02	35	2	20	12	2	20	12
6	0	24	02	0	24	02	36	2	24	12	2	24	12
7	0	28	02	0	28	02	37	2	28	12	2	28	12
8	0	32	02	0	32	02	38	2	32	13	2	32	13
9	0	36	03	0	36	03	39	2	36	13	2	36	13
10	0	40	03	0	40	03	40	2	40	13	2	40	13
11	0	44	03	0	44	03	41	2	44	14	2	44	14
12	0	48	04	0	48	04	42	2	48	14	2	48	14
13	0	52	04	0	52	04	43	2	52	14	2	52	14
14	0	56	04	0	56	04	44	2	56	15	2	56	15
15	1	00	05	1	00	05	45	3	00	15	3	00	15
16	1	04	05	1	04	05	46	3	04	15	3	04	15
17	1	08	05	1	08	05	47	3	08	16	3	08	16
18	1	12	05	1	12	05	48	3	12	16	3	12	16
19	1	16	06	1	16	06	49	3	16	16	3	16	16
20	1	20	06	1	20	06	50	3	20	17	3	20	17
21	1	24	06	1	24	06	51	3	24	17	3	24	17
22	1	28	07	1	28	07	52	3	28	17	3	28	17
23	1	32	07	1	32	07	53	3	32	18	3	32	18
24	1	36	07	1	36	07	54	3	36	18	3	36	18
25	1	40	08	1	40	08	55	3	40	18	3	40	18
26	1	44	08	1	44	08	56	3	44	19	3	44	19
27	1	48	09	1	48	09	57	3	48	19	3	48	19
28	1	52	09	1	52	09	58	3	52	19	3	52	19
29	1	56	09	1	56	09	59	3	56	20	3	56	20
30	2	00	10	2	00	10	60	4	00	20	4	00	20

Mean Ano.	Sign 0 ſubtract.				Sign 1 ſubtract.				Mean Ano.
	Equation.			*Logar.* ♀ *à* ☉.	*Equation.*			*Logarithm* ♀ *à* ☉	
	°	′	″		°	′	″		
0	0	0	0	4.862359	0	23	50	4.861961	30
1	0	0	50	4.862358	0	24	33	4.861934	29
2	0	1	40	4.862356	0	25	15	4.861907	28
3	0	2	30	4.862354	0	25	57	4.861879	27
4	0	3	20	4.862352	0	26	39	4.861850	26
5	0	4	10	4.862348	0	27	20	4.861821	25
6	0	4	59	4.862343	0	28	1	4.861791	24
7	0	5	48	4.862337	0	28	41	4 861760	23
8	0	6	37	4.862330	0	29	21	4.861728	22
9	0	7	26	4.862322	0	30	0	4.861696	21
10	0	8	15	4,862314	0	30	39	4.861663	20
11	0	9	5	4.862304	0	31	17	4.861629	19
12	0	9	54	4.862294	0	31	54	4.861595	18
13	0	10	43	4.862282	0	32	31	4.861559	17
14	0	11	31	4.862270	0	33	8	4.861523	16
15	0	12	19	4.862257	0	33	44	4.861486	15
16	0	13	7	4.862244	0	34	19	4.861449	14
17	0	13	55	4.862229	0	34	53	4.861411	13
18	0	14	42	4.862214	0	35	27	4.861373	12
19	0	15	30	4.862197	0	36	1	4.861334	11
20	0	16	17	4.862180	0	36	33	4.861294	10
21	0	17	4	4.862162	0	37	5	4·861254	9
22	0	17	50	4.862143	0	37	37	4.861213	8
23	0	18	36	4.862123	0	38	8	4 861172	7
24	0	19	22	4.862102	0	38	38	4.861130	6
25	0	20	7	4.862080	0	39	7	4.861087	5
26	0	20	52	4.862058	0	39	36	4.861044	4
27	0	21	37	4.862035	0	40	4	4.861000	3
28	0	22	22	4 862011	0	40	31	4.860956	2
29	0	23	6	4.861982	0	40	58	4.860912	1
30	0	23	50	4.861961	0	41	24	4.860867	0

Sign 11 Add. Sign 10 Add.

Mean Ano.	Sign 2 ſubtract.				Sign 3 ſubtract.				*Mean Ano.*
	Equation.			*Logarithm* ♀ à ☉	Equation			*Logarithm* ♀ à ☉.	
	°	′	″		°	′	″		
0	0	41	24	4.860867	0	48	0	4.859359	30
1	0	41	48	4.860821	0	48	0	4.859306	29
2	0	42	12	4.860775	0	47	59	4.859253	28
3	0	42	35	4.860729	0	47	57	4.859200	27
4	0	42	58	4.860682	0	47	54	4.859147	26
5	0	43	20	4.860635	0	47	50	4.859094	25
6	0	43	41	4.860587	0	47	46	4.859041	24
7	0	44	1	4.860539	0	47	41	4.858989	23
8	0	44	21	4.860490	0	47	34	4.858936	22
9	0	44	40	4.860441	0	47	27	4.858884	21
10	0	44	58	4.860392	0	47	20	4.858831	20
11	0	45	16	4.860342	0	47	11	4.858779	19
12	0	45	32	4.860292	0	47	2	4.858727	18
13	0	45	48	4.860242	0	46	51	4.858675	17
14	0	46	2	4.860192	0	46	40	4.858623	16
15	0	46	16	4.860141	0	46	28	4.858572	15
16	0	46	29	4.860090	0	46	15	4.858521	14
17	0	46	41	4.860039	0	46	1	4.858470	13
18	0	46	53	4.859988	0	45	46	4.858419	12
19	0	47	3	4.859936	0	45	30	4.858368	11
20	0	47	12	4.859884	0	45	14	4.858318	10
21	0	47	20	4.859832	0	44	56	4.858268	9
22	0	47	28	4.859780	0	44	38	4.858218	8
23	0	47	35	4.859728	0	44	19	4.858169	7
24	0	47	42	4.859676	0	43	59	4.858120	6
25	0	47	47	4.859623	0	43	39	4.858072	5
26	0	47	52	4.859570	0	43	18	4.858024	4
27	0	47	55	4.859518	0	42	56	4.857976	3
28	0	47	58	4.859465	0	42	33	4.857928	2
29	0	47	59	4.859412	0	42	9	4.857881	1
30	0	48	0	4.859359	0	41	45	4.857835	0
	Sign 9 add.				Sign 8 add.				

Mean Ano.	Sign 4 ſubtract.				Sign 5 ſubtract.				*Mean Ano.*
	Equation.			Logar. ♀ à ☉.	*Equation.*			*Logarithm* ♀ *a* ☉.	
	°	'	"		°	'	"		
0	0	41	45	4.857835	0	24	10	4.856709	30
1	0	41	19	4.857789	0	23	26	4.856683	29
2	0	40	53	4.857743	0	22	42	4.856657	28
3	0	40	26	4.857698	0	21	57	4.856632	27
4	0	39	59	4.857653	0	21	12	4.856608	26
5	0	39	31	4.857609	0	20	27	4.856585	25
6	0	39	2	4.857566	0	19	41	4.856563	24
7	0	38	38	4.857523	0	18	55	4.856541	23
8	0	38	1	4.857480	0	18	7	4.856520	22
9	0	37	30	4.857438	0	17	20	4.856501	21
10	0	36	58	4.857397	0	16	33	4.856482	20
11	0	36	26	4.857356	0	15	45	4.856464	19
12	0	35	52	4.857316	0	14	57	4.856447	18
13	0	35	19	4.857276	0	14	9	4.856431	17
14	0	34	44	4.857237	0	13	20	4.856415	16
15	0	34	9	4.857199	0	12	32	4.856401	15
16	0	33	33	4.857161	0	11	43	4.856387	14
17	0	32	57	4.857124	0	10	54	4.856375	13
18	0	32	19	4.857088	0	10	4	4.856363	12
19	0	31	42	4.857053	0	9	14	4.856352	11
20	0	31	3	4.857018	0	8	24	4.856342	10
21	0	30	24	4.856984	0	7	34	4.856333	9
22	0	29	45	4.856950	0	6	44	4.856325	8
23	0	29	5	4.856917	0	5	54	4.856318	7
24	0	28	25	4.856885	0	5	3	4.856312	6
25	0	27	44	4.856854	0	4	12	4.856307	5
26	0	27	2	4.856823	0	3	22	4.856303	4
27	0	26	20	4.856794	0	2	31	4.856299	3
28	0	25	37	4.856765	0	1	41	4.856297	2
29	0	24	54	4.856737	0	0	51	4.856295	1
30	0	24	10	4.856709	0	0	0	4.856295	0
	Sign 7 add.				Sign 6 add.				

A TABLE of *Venus's Inclination, with the Reduction from her Orbit to the Ecliptic.*

Argument of Latitude. Reduction ſubtract.

Arg. Latit.	*Si.* 0 N. *Si.* 6 S. } *Aſc.* Inclination.			*Reduct.* *Subtract.*		*Si.* 1 S *Si.* 7 S } *Aſc* Inclination.			*Reduct.* *Subtrac.*		Arg. Latit.
	°	′	″	′	″	°	′	″	′	″	
0	0	0	0	0	0	1	41	32	2	35	30
1	0	3	32	0	7	1	44	36	2	38	29
2	0	7	5	0	13	1	47	37	2	42	28
3	0	10	37	0	19	1	50	35	2	45	27
4	0	14	11	0	26	1	52	32	2	47	26
5	0	17	42	0	32	1	56	28	2	50	25
6	0	21	14	0	38	1	59	24	2	52	24
7	0	24	44	0	45	2	2	14	2	54	23
8	0	28	15	0	51	2	5	3	2	55	22
9	0	31	45	0	57	2	7	48	2	56	21
10	0	35	16	1	2	2	10	34	2	56	20
11	0	38	46	1	8	2	13	15	2	57	19
12	0	42	15	1	13	2	15	56	2	58	18
13	0	45	43	1	18	2	18	33	2	59	17
14	0	49	10	1	24	2	20	38	2	59	16
15	0	52	35	1	29	2	23	39	3	0	15
16	0	55	59	1	34	2	26	6	2	59	14
17	0	59	22	1	40	2	28	33	2	59	13
18	1	2	44	1	45	2	30	57	2	58	12
19	1	6	6	1	50	2	33	18	2	57	11
20	1	9	28	1	54	2	35	36	2	56	10
21	1	12	48	1	59	2	38	13	2	56	9
22	1	16	8	2	3	2	40	5	2	55	8
23	1	19	22	2	8	2	41	54	2	54	7
24	1	22	37	2	12	2	44	21	2	52	6
25	1	25	50	2	16	2	46	25	2	50	5
26	1	29	0	2	21	2	48	25	2	47	4
27	1	32	14	2	25	2	50	23	2	45	3
28	1	35	18	2	28	2	52	18	2	42	2
29	1	38	26	2	32	2	54	8	2	38	1
30	1	41	32	2	35	2	55	58	2	35	0
	Sign 11 S. *Sign* 5 N. } *Deſc.*			*Reduct.* *Add.*		*Sign* 10 S. *Sign* 4 N. } *Deſc.*			*Reduct.* *Add.*		

Arg. Latit.	*Sign* 2 } *Aſc.* *Sign* 8 Inclination. °	′	″	*Subtrac* *Reduct.* ′	″	Arg. Latit.
0	2	55	58	2	35	30
1	2	57	43	2	32	29
2	2	59	25	2	28	28
3	3	1	4	2	25	27
4	3	2	38	2	21	26
5	3	4	9	2	16	25
6	3	5	37	2	12	24
7	3	7	0	2	8	23
8	3	8	23	2	3	22
9	3	9	42	1	59	21
10	3	10	57	1	54	20
11	3	12	8	1	50	19
12	3	13	8	1	45	18
13	3	14	21	1	40	17
14	3	15	20	1	34	16
15	3	16	19	1	29	15
16	3	17	12	1	24	14
17	3	18	2	1	18	13
18	3	18	50	1	13	12
19	3	19	31	1	8	11
20	3	20	11	1	2	10
21	3	20	47	0	57	9
22	3	21	19	0	51	8
23	3	21	47	0	45	7
24	3	22	12	0	38	6
25	3	22	32	0	32	5
26	3	22	49	0	26	4
27	3	23	2	0	19	3
28	3	23	11	0	13	2
29	3	23	17	0	7	1
30	3	23	20	0	0	0
	Sign 9 } *Deſc.* *Sign* 3			*Reduct.* *Add.*		

Argument of Latitude. Reduction Add.

A Table *of* Mars's *Mean Motion in Years.*

Years compleat.	Longitude ♂. S.	°	′	″	Anomaly ♂. S.	°	′	″	Node ♂. S.	°	′	″
1	6	11	17	10	6	11	16	0	0	0	0	38
2	0	22	34	19	0	22	32	0	0	0	1	16
3	7	3	51	28	7	3	47	59	0	0	1	54
B 4	1	15	40	5	1	15	35	26	0	0	2	32
5	7	26	57	14	7	26	51	26	0	0	3	10
6	2	8	14	24	2	8	7	25	0	0	3	48
7	8	19	31	33	8	19	23	25	0	0	4	26
B 8	3	1	28	10	3	1	10	52	0	0	5	4
9	9	12	37	19	9	12	26	51	0	0	5	42
10	3	23	54	28	3	23	42	51	0	0	6	20
11	10	5	11	38	10	4	58	50	0	0	6	58
B 12	4	17	0	14	4	16	46	17	0	0	7	36
13	10	28	17	23	10	28	2	17	0	0	8	14
14	5	9	34	33	5	9	18	16	0	0	8	52
15	11	20	51	42	11	20	34	16	0	0	9	30
B 16	6	2	40	19	6	2	21	43	0	0	10	8
17	0	13	57	29	0	13	37	42	0	0	10	46
18	6	25	14	38	6	24	53	42	0	0	11	24
19	1	6	31	47	1	6	9	42	0	0	12	2
B 20	7	18	20	28	7	17	57	8	0	0	12	40
40	3	6	40	56	3	5	54	16	0	0	25	20
60	10	25	1	24	10	23	51	24	0	0	38	0
80	6	13	21	52	6	11	48	32	0	0	50	40
100	2	1	42	20	1	29	45	40	0	1	3	20
200	4	3	24	40	3	29	31	20	0	2	6	40
300	6	5	7	0	5	29	17	0	0	3	10	0
400	8	6	49	20	7	29	2	40	0	4	13	20
500	10	8	31	40	9	28	48	20	0	5	16	40
600	0	10	14	0	11	28	34	0	0	6	20	0
700	2	11	56	20	1	28	19	40	0	7	23	20
800	4	13	38	40	3	28	5	20	0	8	26	40
900	6	15	21	0	5	27	51	0	0	9	30	0
1000	8	17	3	20	7	27	36	40	0	10	33	20
2000	5	4	6	40	3	25	13	20	0	21	6	40
3000	1	21	10	0	11	22	50	0	1	1	40	0
4000	10	8	13	20	7	20	26	40	1	12	13	20

Years of Christ.	Longitude ♂.				Anomaly ♂.				Node ♂.			
	S.	°	′	″	S.	°	′	″	S.	°	′	″
1	1	9	26	38	9	11	55	28	0	29	28	40
101	3	11	8	51	11	11	41	8	1	0	32	0
201	5	12	51	11	1	11	26	48	1	1	35	20
301	7	14	33	32	3	11	12	28	1	2	38	40
401	9	16	15	52	5	10	58	8	1	3	42	0
501	11	17	58	13	7	10	43	48	1	4	45	20
601	1	19	40	33	9	10	29	28	1	5	48	40
701	3	21	22	54	11	10	15	8	1	6	52	0
801	5	23	5	14	1	10	0	48	1	7	55	20
901	7	24	47	34	3	9	46	28	1	8	58	40
1001	9	26	29	55	5	9	32	8	1	10	2	0
1101	11	28	12	15	7	9	17	48	1	11	5	20
1201	1	29	54	36	9	9	3	28	1	12	8	40
1301	4	1	36	50	11	8	49	8	1	13	12	0
1401	6	3	19	10	1	8	34	48	1	14	15	20
1501	8	5	1	30	3	8	20	28	1	15	18	40
1601	10	6	43	50	5	8	6	8	1	16	22	0
1701	0	8	26	18	7	7	51	48	1	17	25	20
1801	2	10	18	38	9	7	37	28	1	18	28	40
1901	4	11	50	58	11	7	23	8	1	19	32	0
2001	6	13	33	18	1	7	8	48	1	20	35	20
1678	9	15	42	55	4	15	35	14	1	17	10	46
1679	3	27	0	6	10	26	51	14	1	17	11	24
1680	10	8	17	15	5	8	7	14	1	17	12	2
1681	4	20	5	50	11	19	54	40	1	17	12	40
1682	11	1	23	0	6	1	10	40	1	17	13	18
1683	5	12	40	9	0	12	26	40	1	17	13	56
1684	11	23	57	20	6	23	42	39	1	17	14	34
1685	6	5	45	55	1	5	30	6	1	17	15	12
1686	0	17	3	7	7	16	46	5	1	17	15	50
1687	6	28	20	14	1	28	2	5	1	17	16	28
1688	1	9	37	28	8	9	19	5	1	17	17	6
1689	7	21	26	0	2	21	5	31	1	17	17	44
1690	2	2	43	14	9	2	21	31	1	17	18	22
1691	8	14	0	19	3	13	37	31	1	17	19	0
1692	2	25	17	34	9	24	53	30	1	17	19	38

Years of Christ.	Longitude ♂.				Anomaly ♂.				Node ♂.			
	S.	°	′	″	S.	°	′	″	S.	°	′	″
1693	9	7	6	5	4	6	40	57	1	17	20	16
1694	3	18	23	21	10	17	56	57	1	17	20	54
1695	9	29	40	25	4	29	12	56	1	17	21	32
1696	4	10	57	41	11	10	28	56	1	17	22	10
1697	10	22	46	12	5	22	16	23	1	17	22	48
1698	5	4	3	28	0	3	32	23	1	17	23	26
1699	11	15	20	31	6	14	48	23	1	17	24	4
1700	5	26	37	48	0	26	4	23	1	17	24	42
1701	0	8	26	18	7	7	51	48	1	17	25	20
1702	6	19	43	28	1	19	7	48	1	17	25	58
1703	1	1	0	37	8	0	23	48	1	17	26	36
1704	7	12	17	47	2	11	39	48	1	17	27	14
1705	1	24	6	23	8	23	27	14	1	17	27	52
1706	8	5	23	33	3	4	43	13	1	17	28	30
1707	2	16	40	43	9	15	59	13	1	17	29	8
1708	8	27	57	51	3	27	15	12	1	17	29	46
1709	3	9	46	28	10	9	2	39	1	17	30	24
1710	9	21	3	38	4	20	18	39	1	17	31	2
1711	4	2	20	48	11	1	34	37	1	17	31	40
1712	10	13	37	58	5	12	50	37	1	17	32	18
1713	4	25	26	35	11	24	38	4	1	17	32	56
1714	11	6	43	45	6	5	54	3	1	17	33	34
1715	5	18	0	55	0	17	10	3	1	17	34	12
1716	11	29	18	4	6	28	26	3	1	17	34	50
1717	6	11	6	41	1	10	13	30	1	17	35	28
1718	0	22	23	51	7	21	29	29	1	17	36	6
1719	7	3	41	1	2	2	45	28	1	17	36	44
1720	1	14	58	11	8	14	1	28	1	17	37	22
1721	7	26	46	46	2	25	48	56	1	17	38	0
1722	2	8	3	56	9	7	4	56	1	17	38	38
1723	8	19	21	6	3	18	20	56	1	17	39	16
1724	3	0	38	16	9	29	36	55	1	17	39	54
1725	9	12	26	52	4	11	24	22	1	17	40	32
1726	3	23	44	2	10	22	40	21	1	17	41	10
1727	10	5	1	12	5	3	56	21	1	17	41	48
1728	4	16	18	21	11	15	12	21	1	17	42	26

Years of Christ.	Longitude ♂.				Anomaly ♂.				Node ♂.			
	S.	°	′	″	S.	°	′	″	S.	°	′	″
1729	10	28	6	57	5	26	59	47	1	17	43	4
1730	5	9	24	7	0	8	15	47	1	17	43	42
1731	11	20	41	16	6	19	31	47	1	17	44	20
1732	6	1	58	26	1	0	47	46	1	17	44	58
1733	0	13	47	2	7	12	35	13	1	17	45	36
1734	6	25	4	12	1	23	51	13	1	17	46	14
1735	1	6	21	22	8	5	7	12	1	17	46	52
1736	7	17	38	31	2	16	23	12	1	17	47	30
1737	1	29	27	9	8	28	10	39	1	17	48	8
1738	8	10	44	18	3	9	26	39	1	17	48	46
1739	2	22	1	29	9	20	42	38	1	17	49	24
1740	9	3	18	38	4	1	58	38	1	17	50	2
1741	3	15	7	14	10	13	46	4	1	17	50	40
1742	9	26	24	24	4	25	2	4	1	17	51	18
1743	4	7	41	34	11	6	18	4	1	17	51	56
1744	10	18	58	43	5	17	34	3	1	17	52	34
1745	5	0	47	20	11	29	21	30	1	17	53	12
1746	11	12	4	30	6	10	37	30	1	17	53	50
1747	5	23	21	39	0	21	53	29	1	17	54	28
1748	0	4	38	49	7	3	9	29	1	17	55	6
1749	6	16	27	26	1	14	56	56	1	17	55	44
1750	0	27	44	35	7	26	12	56	1	17	56	22
1751	7	9	1	45	2	7	28	56	1	17	57	0
1752	1	20	18	55	8	18	44	56	1	17	57	38
1753	8	2	7	31	3	0	32	22	1	17	58	16
1754	2	13	24	41	9	11	48	22	1	17	58	54
1755	8	24	41	50	3	23	4	22	1	17	59	32
1756	3	5	59	0	10	4	20	21	1	18	0	10
1757	9	17	47	37	4	16	7	48	1	18	0	48
1758	3	29	4	47	10	27	23	48	1	18	1	26
1759	10	10	21	56	5	8	39	47	1	18	2	4
1760	4	21	39	5	11	19	55	46	1	18	2	42
1761	11	3	27	42	6	1	43	12	1	18	3	20
1762	5	14	44	52	0	12	59	12	1	18	3	58
1763	11	26	2	1	6	24	15	12	1	18	4	36
1764	6	7	19	11	1	5	31	12	1	18	5	14

Years of Christ.	Longitude ♂.				Anomaly ♂.				Node ♂.			
	S.	°	′	″	S.	°	′	″	S.	°	′	″
1765	00	19	07	47	07	17	18	38	1	18	05	52
1766	07	00	24	56	01	28	34	38	1	18	06	30
1767	01	11	42	06	08	09	50	38	1	18	07	08
1768	07	22	59	16	02	21	06	37	1	18	07	46
1769	02	04	47	52	09	02	54	04	1	18	08	24
1770	08	16	05	02	03	14	10	04	1	18	09	02
1771	02	27	22	12	09	25	26	04	1	18	09	40
1772	09	08	39	21	04	06	42	03	1	18	10	18
1773	03	20	27	57	10	18	29	30	1	18	10	56
1774	10	01	45	07	04	29	45	30	1	18	11	34
1775	04	13	02	17	11	11	01	30	1	18	12	12
1776	10	24	19	26	05	22	17	29	1	18	12	50
1777	05	06	08	02	00	04	04	56	1	18	13	28
1778	11	17	25	12	06	15	20	56	1	18	14	06
1779	05	28	42	22	00	26	36	56	1	18	14	44
1780	00	09	59	32	07	07	52	55	1	18	15	22
1781	06	21	48	10	01	19	40	20	1	18	16	00
1782	01	03	05	20	08	00	56	20	1	18	16	38
1783	07	14	22	29	02	12	12	20	1	18	17	16
1784	01	25	39	39	08	23	28	19	1	18	17	54
1785	08	07	28	16	03	05	15	46	1	18	18	32
1786	02	18	45	26	09	16	31	46	1	18	19	10
1787	09	00	02	35	03	27	47	46	1	18	19	48
1788	03	11	19	45	10	09	03	45	1	18	20	26
1789	09	23	08	21	04	20	51	12	1	18	21	04
1790	04	04	25	31	11	02	07	12	1	18	21	42
1791	10	15	42	40	05	13	23	12	1	18	22	20
1792	04	26	59	50	11	24	39	11	1	18	22	58
1793	11	08	48	26	06	06	26	38	1	18	23	36
1794	05	20	05	36	00	17	42	38	1	18	24	14
1795	00	01	22	46	06	28	58	38	1	18	24	52
1796	06	12	39	55	01	10	14	37	1	18	25	30
1797	00	24	28	31	07	22	02	04	1	18	26	08
1798	07	05	45	41	02	03	18	04	1	18	26	46
1799	01	17	02	51	08	14	34	03	1	18	27	24
1800	07	28	20	01	02	25	50	03	1	18	28	02

Years of Chriſt.	Longitude ♂.				Anomaly ♂.				Node ♂.			
	S.	°	′	″	S.	°	′	″	S.	°	′	″
1801	2	10	8	38	9	7	37	28	1	18	28	40
1802	8	21	25	48	3	18	53	28	1	18	29	18
1803	3	2	42	58	10	0	9	28	1	18	29	56
1804	9	14	0	7	4	11	25	27	1	18	30	34
1805	3	25	48	44	10	23	12	54	1	18	31	12
1806	10	7	5	54	5	4	28	54	1	18	31	50
1807	4	18	23	4	11	15	44	54	1	18	32	28
1808	10	29	40	13	5	27	0	53	1	18	33	6
1809	5	11	28	50	0	8	48	24	1	18	33	44
1810	11	22	46	0	6	20	4	20	1	18	34	22
1811	6	4	3	9	1	1	20	19	1	18	35	0
1812	0	15	20	19	7	12	36	19	1	18	35	38
1813	6	27	8	56	1	24	23	45	1	18	36	16
1814	1	8	26	6	8	5	39	45	1	18	36	54
1815	7	19	43	16	2	16	55	45	1	18	37	32
1816	2	1	0	26	8	28	11	44	1	18	38	10
1817	8	12	49	3	3	9	54	11	1	18	38	48
1818	2	24	6	13	9	21	15	11	1	18	39	26
1819	9	5	23	22	4	2	31	11	1	18	40	4
1820	3	16	40	31	10	13	47	10	1	18	40	42
1821	9	28	29	6	4	25	34	36	1	18	41	20
1822	4	9	46	16	11	6	50	36	1	18	41	58
1823	10	21	3	25	5	18	6	36	1	18	42	36
1824	5	2	20	35	11	29	22	36	1	18	43	14
1825	11	14	9	11	6	11	10	2	1	18	43	52
1826	5	25	26	21	0	22	26	2	1	18	44	30
1827	0	6	43	31	7	3	42	2	1	18	45	8
1828	6	18	0	41	1	14	58	1	1	18	45	46
1829	0	29	49	7	7	26	45	28	1	18	46	24
1830	7	11	6	17	2	8	1	28	1	18	47	2
1831	1	22	23	27	8	19	17	27	1	18	47	40
1832	8	3	40	36	3	0	33	27	1	18	48	18
1833	2	15	29	13	9	12	20	54	1	18	48	56
1834	8	26	46	23	3	23	36	53	1	18	49	34
1835	3	8	3	32	10	4	52	53	1	18	50	12
1836	9	19	20	54	4	16	8	52	1	18	50	50

JANUARY.

Common Year. ǁ	Longitude ♂.				Anomaly ♂.				Biſſextile. ǁ
	S.	°	′	″	S.	°	′	″	
1	0	0	31	27	0	0	31	27	0
2	0	1	2	53	0	1	2	53	1
3	0	1	34	20	0	1	34	20	2
4	0	2	5	47	0	2	5	47	3
5	0	2	37	13	0	2	37	12	4
6	0	3	8	40	0	3	8	39	5
7	0	3	40	7	0	3	40	6	6
8	0	4	11	33	0	4	11	32	7
9	0	4	43	0	0	4	42	59	8
10	0	5	14	27	0	5	14	25	9
11	0	5	45	53	0	5	45	51	10
12	0	6	17	20	0	6	17	18	11
13	0	6	48	46	0	6	48	44	12
14	0	7	20	13	0	7	20	11	13
15	0	7	51	40	0	7	51	37	14
16	0	8	23	6	0	8	23	3	15
17	0	8	54	33	0	8	54	30	16
18	0	9	26	0	0	9	25	57	17
19	0	9	57	26	0	9	57	23	18
20	0	10	28	53	0	10	28	49	19
21	0	11	0	20	0	11	0	16	20
22	0	11	31	46	0	11	31	42	21
23	0	12	3	13	0	12	3	9	22
24	0	12	34	40	0	12	34	36	23
25	0	13	6	6	0	13	6	2	24
26	0	13	37	33	0	13	37	28	25
27	0	14	9	0	0	14	8	55	26
28	0	14	40	26	0	14	40	21	27
29	0	15	11	53	0	15	11	48	28
30	0	15	43	20	0	15	43	15	29
31	0	16	14	46	0	16	14	40	30

FEBRUARY.

Common Year.	Longitude ♂.				Anomaly ♂.				Biſſextile.
	S.	°	′	″	S.	°	′	″	
1	0	16	46	13	0	16	46	07	0
2	0	17	17	39	0	17	17	33	1
3	0	17	49	06	0	17	49	00	2
4	0	18	20	33	0	18	20	27	3
5	0	18	51	59	0	18	05	52	4
6	0	19	23	26	0	19	23	19	5
7	0	19	54	53	0	19	54	46	6
8	0	20	26	19	0	20	26	12	7
9	0	20	57	46	0	20	57	39	8
10	0	21	29	13	0	21	29	05	9
11	0	22	00	39	0	22	00	31	10
12	0	22	32	06	0	22	31	58	11
13	0	23	03	32	0	23	03	24	12
14	0	23	34	59	0	23	34	51	13
15	0	24	06	26	0	24	06	18	14
16	0	24	37	52	0	24	37	43	15
17	0	25	09	19	0	25	09	10	16
18	0	25	40	46	0	25	40	37	17
19	0	26	12	12	0	26	12	03	18
20	0	26	43	39	0	26	43	29	19
21	0	27	15	06	0	27	14	56	20
22	0	27	46	32	0	27	46	22	21
23	0	28	17	59	0	28	17	49	22
24	0	28	49	26	0	28	49	16	23
25	0	29	20	52	0	29	20	42	24
26	0	29	52	19	0	29	52	08	25
27	1	0	23	46	1	0	23	35	26
28	1	0	55	12	1	0	55	01	27
29	1	1	26	39	1	0	26	28	28
30									29
31									30

MARCH.

Common Year.	Longitude ♂. S.	°	′	″	Anomaly ♂. S.	°	′	″	Biſſextile.
1	1	1	26	39	1	0	26	28	0
2	1	1	58	05	1	1	57	53	1
3	1	2	29	32	1	2	29	20	2
4	1	3	00	59	1	3	00	47	3
5	1	3	32	25	1	3	32	13	4
6	1	4	03	52	1	4	03	40	5
7	1	4	35	19	1	4	35	06	6
8	1	5	06	45	1	5	06	32	7
9	1	5	38	12	1	5	37	59	8
10	1	6	09	39	1	6	09	26	9
11	1	6	41	05	1	6	40	52	10
12	1	7	12	32	1	7	12	18	11
13	1	7	43	58	1	7	43	44	12
14	1	8	15	25	1	8	15	11	13
15	1	8	46	52	1	8	46	38	14
16	1	9	18	18	1	9	18	04	15
17	1	9	49	45	1	9	49	30	16
18	1	10	21	12	1	10	20	57	17
19	1	10	52	38	1	10	52	23	18
20	1	11	24	05	1	11	23	50	19
21	1	11	55	32	1	11	55	17	20
22	1	12	26	58	1	12	26	42	21
23	1	12	58	25	1	12	58	09	22
24	1	13	29	52	1	13	29	36	23
25	1	14	01	18	1	14	01	01	24
26	1	14	32	45	1	14	32	29	25
27	1	15	04	12	1	15	03	56	26
28	1	15	35	38	1	15	35	21	27
29	1	16	07	05	1	16	06	48	28
30	1	16	38	32	1	16	38	15	29
31	1	17	09	58	1	17	09	41	30

APRIL.

Common Year.	Longitude ♂.				Anomaly ♂.				Biſſextile.
	S.	°	′	″	S.	°	′	″	
1	1	17	41	26	1	17	41	8	0
2	1	18	12	52	1	18	12	34	1
3	1	18	44	19	1	18	44	1	2
4	1	19	15	46	1	19	15	28	3
5	1	19	47	12	1	19	46	54	4
6	1	20	18	39	1	20	18	20	5
7	1	20	50	6	1	20	49	47	6
8	1	21	21	32	1	21	21	13	7
9	1	21	52	59	1	21	52	40	8
10	1	22	24	26	1	22	24	7	9
11	1	22	55	52	1	22	55	32	10
12	1	23	27	19	1	23	26	59	11
13	1	23	58	45	1	23	58	25	12
14	1	24	30	12	1	24	29	52	13
15	1	25	1	39	1	24	1	19	14
16	1	25	33	5	1	25	32	45	15
17	1	26	4	32	1	26	4	11	16
18	1	26	15	59	1	26	15	38	17
19	1	27	7	25	1	27	7	4	18
20	1	27	38	52	1	27	38	31	19
21	1	28	10	19	1	28	9	58	20
22	1	28	41	45	1	28	41	24	21
23	1	29	13	12	1	29	92	50	22
24	1	29	44	19	1	29	44	17	23
25	2	0	16	5	2	0	15	43	24
26.	2	0	47	32	2	0	47	10	25
27	2	1	18	59	2	1	18	36	26
28	2	1	49	25	2	1	49	2	27
29	2	2	21	52	2	2	21	29	28
30	2	2	53	19	2	2	52	56	29
31	2	3	24	45	2	3	24	22	30

MAY.

Common Year.	Longitude ♂. S.	°	′	″	Anomaly ♂. S.	°	′	″	Biſſextile.
1	2	3	24	45	2	3	24	22	0
2	2	3	56	11	2	3	55	47	1
3	2	4	27	38	2	4	27	14	2
4	2	4	59	05	2	4	58	41	3
5	2	5	30	31	2	5	30	07	4
6	2	6	01	58	2	6	01	34	5
7	2	6	33	25	2	6	33	00	6
8	2	7	04	51	2	7	04	26	7
9	2	7	36	18	2	7	35	53	8
10	2	8	07	45	2	8	07	20	9
11	2	8	39	11	2	8	38	46	10
12	2	9	10	38	2	9	10	13	11
13	2	9	42	04	2	9	41	39	12
14	2	10	13	31	2	10	13	06	13
15	2	10	44	58	2	10	44	32	14
16	2	11	16	24	2	11	15	58	15
17	2	11	47	51	2	11	47	24	16
18	2	12	19	18	2	12	18	51	17
19	2	12	50	44	2	12	50	17	18
20	2	13	22	11	2	13	21	44	19
21	2	13	53	38	2	13	53	11	20
22	2	14	25	04	2	14	24	36	21
23	2	14	56	31	2	14	56	03	22
24	2	15	27	58	2	15	27	30	23
25	2	15	59	24	2	15	58	56	24
26	2	16	20	51	2	16	20	23	25
27	2	17	02	18	2	17	01	49	26
28	2	17	53	44	2	17	53	15	27
29	2	18	05	11	2	18	04	42	28
30	2	18	36	38	2	18	36	09	29
31	2	19	08	04	2	19	07	35	30

JUNE.

Common Year.	Longitude ♂.				Anomaly ♂.				*Biſſextile.*
||	S.	°	′	″	S.	°	′	″	||
1	2	19	39	32	2	19	39	2	0
2	2	20	10	58	2	20	10	28	1
3	2	20	42	25	2	20	41	55	2
4	2	21	13	52	2	21	13	22	3
5	2	21	45	18	2	21	44	48	4
6	2	22	16	45	2	22	16	34	5
7	2	22	48	12	2	22	47	41	6
8	2	23	19	38	2	23	19	7	7
9	2	23	51	05	2	23	50	14	8
10	2	24	22	32	2	24	22	1	9
11	2	42	53	58	2	24	53	27	10
12	2	25	25	25	2	25	24	53	11
13	2	25	56	51	2	25	56	19	12
14	2	26	28	18	2	26	27	46	13
15	2	26	59	45	2	26	59	13	14
16	2	27	31	11	2	27	30	39	15
17	2	28	02	28	2	28	1	56	16
18	2	28	34	05	2	28	33	33	17
19	2	29	05	31	2	29	4	58	18
20	2	29	36	58	2	29	36	25	19
21	3	0	08	25	3	0	7	52	20
22	3	0	39	51	3	0	39	18	21
23	3	1	11	18	3	1	10	44	22
24	3	1	42	42	3	1	42	8	23
25	3	2	14	11	3	2	13	37	24
26	3	2	45	38	3	2	45	3	25
27	3	3	17	05	3	3	16	30	26
28	3	3	48	31	3	3	47	56	27
29	3	4	19	58	3	4	19	23	28
30	3	4	51	25	3	4	50	50	29
31	3	5	22	51	3	5	22	16	30

J U L Y.

Common Year.	Longitude ♂.				Anomaly ♂.				Biſſextile.
	S.	°	′	″	S.	°	′	″	
1	3	5	22	52	3	5	22	16	0
2	3	5	54	18	3	5	53	42	1
3	3	6	25	45	3	6	25	9	2
4	3	6	57	12	3	6	56	36	3
5	3	7	28	38	3	7	28	2	4
6	3	8	0	5	3	7	59	38	5
7	3	8	31	32	3	8	30	55	6
8	3	9	2	58	3	9	2	21	7
9	3	9	34	25	3	9	33	48	8
10	3	10	5	52	3	10	5	15	9
11	3	10	37	18	3	10	36	40	10
12	3	11	8	45	3	11	8	7	11
13	3	11	40	11	3	11	39	33	12
14	3	12	11	38	3	12	11	0	13
15	3	12	43	5	3	12	42	27	14
16	3	13	14	31	3	13	13	52	15
17	3	13	45	58	3	13	45	19	16
18	3	14	17	25	3	14	16	46	17
19	3	14	48	51	3	14	48	12	18
20	3	15	50	18	3	15	49	39	19
21	3	15	51	45	3	15	51	6	20
22	3	16	23	11	3	16	22	31	21
23	3	16	54	48	3	16	54	8	22
24	3	17	26	5	3	17	25	25	23
25	3	17	57	31	3	17	56	51	24
26	3	18	28	58	3	18	28	17	25
27	3	19	0	25	3	18	59	44	26
28	3	19	31	51	3	19	31	10	27
29	3	20	3	18	3	20	2	37	28
30	3	20	34	45	3	20	34	4	29
31	3	21	6	11	3	21	5	30	30

AUGUST.

Common Year.	Longitude ♂.				Anomaly ♂.				Biſſextile.
	S.	°	′	″	S.	°	′	″	
1	3	21	37	38	3	21	36	56	0
2	3	22	9	4	3	22	8	22	1
3	3	22	40	31	3	22	39	49	2
4	3	23	11	58	3	23	11	16	3
5	3	23	43	24	3	23	42	41	4
6	3	24	14	51	3	24	14	8	5
7	3	24	46	18	3	24	45	35	6
8	3	25	17	44	3	25	17	1	7
9	3	25	49	11	3	25	48	28	8
10	3	26	20	38	3	26	19	54	9
11	3	26	52	4	3	26	51	20	10
12	3	27	23	31	3	27	22	47	11
13	3	27	54	57	3	27	54	13	12
14	3	28	26	24	3	28	25	40	13
15	3	28	57	51	3	28	57	7	14
16	3	29	29	17	3	29	28	32	15
17	4	0	0	44	3	29	59	59	16
18	4	0	32	11	4	0	31	26	17
19	4	1	3	37	4	1	2	52	18
20	4	1	35	4	4	1	34	18	19
21	4	2	6	31	4	2	5	45	20
22	4	2	37	57	4	2	37	11	21
23	4	3	9	24	4	3	8	38	22
24	4	3	40	51	4	3	40	3	23
25	4	4	12	17	4	4	11	30	24
26	4	4	43	44	4	4	42	57	25
27	4	5	15	11	4	5	14	24	26
28	4	5	46	37	4	5	45	50	27
29	4	6	18	4	4	6	17	17	28
30	4	6	49	31	4	6	48	43	29
31	4	7	20	57	4	7	20	9	30

SEPTEMBER.

Common Year.	Longitude ♂.				Anomaly ♂.				Biſſextile.
	S.	°	′	″	S.	°	′	″	
1	4	7	52	24	4	7	51	36	0
2	4	8	23	49	4	8	23	1	1
3	4	8	55	17	4	8	54	29	2
4	4	9	26	44	4	9	25	55	3
5	4	9	58	10	4	9	57	21	4
6	4	10	29	37	4	10	28	48	5
7	4	11	1	4	4	11	0	15	6
8	4	11	32	30	4	11	31	41	7
9	4	12	3	57	4	12	3	7	8
10	4	12	35	24	4	12	35	34	9
11	4	13	36	50	4	13	36	0	10
12	4	13	38	17	4	13	37	27	11
13	4	14	9	43	4	14	8	53	12
14	4	14	41	10	4	14	40	20	13
15	4	15	12	37	4	15	11	46	14
16	4	15	44	3	4	15	43	12	15
17	4	16	15	30	4	16	14	39	16
18	4	16	46	57	4	16	46	6	17
19	4	17	18	23	4	17	17	31	18
20	4	17	49	50	4	17	48	58	19
21	4	18	21	17	4	18	20	25	20
22	4	18	52	43	4	18	51	51	21
23	4	19	24	10	4	19	23	18	22
24	4	19	55	37	4	19	54	44	23
25	4	20	27	3	4	20	26	9	24
26	4	20	58	30	4	20	57	37	25
27	4	21	29	57	4	21	29	4	26
28	4	22	1	23	4	22	0	30	27
29	4	22	32	50	4	22	31	57	28
30	4	23	4	17	4	23	3	23	29
31	4	23	35	43	4	23	34	49	30

OCTOBER.

Common Year.	Longitude ♂.				Anomaly ♂.				Biſſextile.
	S.	°	'	''	S.	°	'	''	
1	4	23	35	43	4	23	34	49	0
2	4	24	7	10	4	24	6	16	1
3	4	24	38	37	4	24	37	53	2
4	4	25	10	4	4	25	9	9	3
5	4	25	41	30	4	25	40	35	4
6	4	26	12	57	4	26	12	2	5
7	4	26	44	24	4	26	43	29	6
8	4	27	15	50	4	27	14	55	7
9	4	27	47	17	4	27	46	22	8
10	4	28	18	44	4	28	17	49	9
11	4	28	50	10	4	28	49	14	10
12	4	29	21	37	4	29	20	41	11
13	4	29	53	3	4	29	52	7	12
14	5	0	24	30	5	0	23	33	13
15	5	0	55	57	5	0	55	0	14
16	5	1	27	23	5	1	26	26	15
17	5	1	58	50	5	1	57	53	16
18	5	2	30	17	5	2	29	20	17
19	5	3	1	43	5	3	0	45	18
20	5	3	33	10	5	3	32	12	19
21	5	4	4	37	5	4	3	39	20
22	5	4	36	3	5	4	35	5	21
23	5	5	7	30	5	5	6	31	22
24	5	5	38	57	5	5	37	58	23
25	5	6	10	23	5	6	9	24	24
26	5	6	41	50	5	6	40	51	25
27	5	7	13	17	5	7	12	18	26
28	5	7	44	43	5	7	43	44	27
29	5	8	16	10	5	8	15	10	28
30	5	8	47	37	5	8	46	37	29
31	5	9	19	3	5	9	18	3	30

NOVEMBER.

Common Year.	Longitude ♂.				Anomaly ♂.				Biſſextile.
‖	S.	°	′	″	S.	°	′	″	‖
1	5	9	50	30	5	9	49	30	0
2	5	10	21	56	5	10	20	56	1
3	5	10	53	23	5	10	52	23	2
4	5	11	24	50	5	11	23	49	3
5	5	11	56	16	5	11	56	15	4
6	5	12	27	43	5	12	26	42	5
7	5	12	59	10	5	12	58	9	6
8	5	13	30	36	5	13	29	35	7
9	5	14	2	3	5	14	1	2	8
10	5	14	33	30	5	14	32	29	9
11	5	15	4	56	5	14	3	54	10
12	5	15	36	23	5	15	35	21	11
13	5	16	7	49	5	16	6	47	12
14	5	16	39	16	5	16	38	13	13
15	5	17	10	43	5	17	9	40	14
16	5	17	42	9	5	17	41	6	15
17	5	18	13	36	5	18	12	33	16
18	5	18	43	3	5	18	42	0	17
19	5	19	16	29	5	19	15	25	18
20	5	20	47	56	5	19	46	51	19
21	5	20	19	23	5	20	18	19	20
22	5	21	50	49	5	20	49	45	21
23	5	21	22	16	5	21	21	12	22
24	5	21	53	23	5	21	52	39	23
25	5	22	25	9	5	22	24	4	24
26	5	22	56	36	5	22	55	31	25
27	5	23	28	3	5	23	26	58	26
28	5	23	59	29	5	23	58	24	27
29	5	24	30	56	5	24	29	50	28
30	5	25	2	23	5	25	1	17	29
31	5	25	33	49	5	25	32	43	30

DECEMBER.

Common Year.	Longitude ♂.				Anomaly ♂.				Bissextile.
‖	S.	°	′	″	S.	°	′	″	‖
1	5	25	33	49	5	25	32	43	0
2	5	26	5	16	5	26	4	10	1
3	5	26	36	43	5	26	35	37	2
4	5	27	8	10	5	27	9	3	3
5	5	27	39	36	5	27	38	29	4
6	5	28	11	3	5	28	10	56	5
7	5	28	42	30	5	28	41	23	6
8	5	29	13	56	5	29	12	49	7
9	5	29	45	23	5	29	44	16	8
10	6	0	16	50	6	0	15	42	9
11	6	0	48	16	6	0	47	8	10
12	6	1	19	43	6	1	18	35	11
13	6	1	51	9	6	1	50	1	12
14	6	2	22	36	6	2	21	27	13
15	6	2	54	3	6	2	53	54	14
16	6	3	25	29	6	3	24	20	15
17	6	3	56	56	6	3	55	47	16
18	6	4	28	23	6	4	27	14	17
19	6	4	59	49	6	4	58	39	18
20	6	5	31	16	6	5	30	6	19
21	6	6	2	43	6	6	1	33	20
22	6	6	34	9	6	6	33	59	21
23	6	7	5	36	6	7	4	26	22
24	6	7	37	3	6	7	36	53	23
25	6	8	8	29	6	8	7	18	24
26	6	8	39	56	6	8	38	45	25
27	6	9	11	23	6	9	10	12	26
28	6	9	42	49	6	9	41	38	27
29	6	10	14	16	6	10	13	5	28
30	6	10	45	43	6	10	44	31	29
31	6	11	17	9	6	11	16	57	30

H.	Long. ♂.			Anom. ♂.			H.	Long. ♂.			Anom. ♂.		
	°	'	"	°	'	"		°	'	"	°	'	"
'	'	"	'''	'	"	'''	'	'	"	'''	'	"	'''
"	"	'''	''''	"	'''	''''	"	"	'''	''''	"	'''	''''
1	0	1	19	0	1	19	31	0	40	37	0	40	37
2	0	2	37	0	2	37	32	0	41	56	0	41	56
3	0	3	56	0	3	56	33	0	43	15	0	43	15
4	0	5	15	0	5	15	34	0	44	33	0	44	33
5	0	6	33	0	6	33	35	0	45	52	0	45	52
6	0	7	52	0	7	52	36	0	47	11	0	47	11
7	0	9	10	0	9	10	37	0	48	30	0	48	30
8	0	10	29	0	10	29	38	0	49	49	0	49	49
9	0	11	48	0	11	48	39	0	51	6	0	51	6
10	0	13	6	0	13	6	40	0	52	25	0	52	25
11	0	14	25	0	14	25	41	0	53	44	0	53	44
12	0	15	43	0	15	43	42	0	55	2	0	55	2
13	0	17	2	0	17	2	43	0	56	21	0	56	21
14	0	18	21	0	18	21	44	0	57	39	0	57	39
15	0	19	39	0	19	39	45	0	58	58	0	58	58
16	0	20	58	0	20	58	46	1	0	16	1	0	16
17	0	22	16	0	22	16	47	1	1	34	1	1	34
18	0	23	35	0	23	35	48	1	2	53	1	2	53
19	0	24	54	0	24	54	49	1	4	12	1	4	12
20	0	26	16	0	26	16	50	1	5	30	1	5	30
21	0	27	31	0	27	31	51	1	6	49	1	6	49
22	0	28	49	0	28	49	52	1	8	8	1	8	8
23	0	30	8	0	30	8	53	1	9	26	1	9	26
24	0	31	27	0	31	27	54	1	10	45	1	10	45
25	0	32	45	0	32	45	55	1	12	4	1	12	4
26	0	34	4	0	34	4	56	1	13	22	1	13	22
27	0	35	22	0	35	22	57	1	14	40	1	14	40
28	0	36	41	0	36	41	58	1	15	59	1	15	59
29	0	38	0	0	38	0	59	1	17	18	1	17	18
30	0	39	18	0	39	18	60	1	18	30	1	18	30

Mean Ano.	Sign 0 ſubtract.				Sign 1 ſubtract.				Mean Ano.
	Equation.			Logar. ♂ à ☉.	*Equation.*			*Logarithm* ♂ *a* ☉.	
	°	′	″		°	′	″		
0	0	0	0	5.221516	4	50	1	5.217310	30
1	0	10	0	5.221511	4	59	0	5.217027	29
2	0	19	59	5.221497	5	7	55	5.216735	28
3	0	29	58	5.221473	5	16	46	5.216435	27
4	0	39	57	5.221441	5	25	32	5.216126	26
5	0	49	55	5.221398	5	34	14	5.215808	25
6	0	59	53	5.221346	5	42	51	5.215481	24
7	1	9	50	5.221285	5	51	24	5.215145	23
8	1	19	46	5.221215	5	59	52	5.214801	22
9	1	29	41	5.221135	6	8	15	5.214448	21
10	1	39	50	5.221046	6	16	33	5.214087	20
11	1	49	27	5.220947	6	24	45	5.213717	19
12	1	59	18	5.220839	6	32	52	5.213338	18
13	2	9	7	5.220721	6	40	53	5.212951	17
14	2	18	55	5.220594	6	48	49	5.212556	16
15	2	28	41	5.220458	6	56	40	5.212152	15
16	2	38	25	5.220313	7	4	25	5.211740	14
17	2	48	7	5.220158	7	12	4	5.211319	13
18	2	57	46	5.219994	7	19	36	5.210890	12
19	3	7	23	5.219821	7	27	2	5.210453	11
20	3	16	59	5.219639	7	34	22	5.210009	10
21	3	26	31	5.219447	7	41	35	5.209556	9
22	3	36	0	5.219245	7	48	41	5.209095	8
23	3	45	27	5.219035	7	55	40	5.208627	7
24	3	54	50	5.218817	8	2	33	5.208152	6
25	4	4	10	5.218588	8	9	18	5.207668	5
26	4	13	28	5.218351	8	15	57	5.207175	4
27	4	22	42	5.218104	8	22	28	5.206674	3
28	4	31	52	5.217848	8	28	52	5.206167	2
29	4	40	58	5.217583	8	35	8	5.205654	1
30	4	50	1	5.217310	8	41	16	5.205134	0

Sign 11 Add. Sign 10 Add,

Mean Ano.	Sign 2 ſubtract.				Sign 3 ſubtract.				*Mean Ano.*
	Equation.			*Logarith.* ♂ *à* ☉	*Equation.*			*Logarith.* ♂ *à* ☉	
	°	′	″		°	′	″		
0	8	41	16	5.205134	10	35	46	5.186615	30
1	8	47	17	5.204606	10	36	57	5.185924	29
2	8	53	10	5.204070	10	37	57	5.185229	28
3	8	58	54	5.203527	10	38	45	5.184531	27
4	9	4	30	5.202977	10	39	21	5.182831	26
5	9	9	58	5.202421	10	39	46	5.183128	25
6	9	15	18	5.201857	10	40	0	5.182413	24
7	9	20	29	5.201287	10	40	2	5.181716	23
8	9	25	31	5.200711	10	39	52	5.181006	22
9	9	30	24	5.200128	10	39	30	5.180295	21
10	9	35	9	5.199538	10	38	57	5.179582	20
11	9	39	45	5.198942	10	38	12	5.178868	19
12	9	44	11	5.198340	10	37	14	5.178153	18
13	9	48	28	5.197732	10	36	4	5.177437	17
14	9	52	36	5.197118	10	34	43	5.176721	16
15	9	56	24	5.196499	10	33	9	5.176004	15
16	10	0	22	5.195874	10	31	21	5.175287	14
17	10	4	0	5.195244	10	29	24	5.174570	13
18	10	7	29	5.194608	10	27	14	5.173853	12
19	10	10	48	5.193967	10	24	51	5.173137	11
20	10	13	57	5.193322	10	22	15	5.172421	10
21	10	16	55	5.192671	10	19	27	5.171706	9
22	10	19	43	5.192015	10	16	27	5.170997	8
23	10	22	21	5.191355	10	13	15	5.170281	7
24	10	24	49	5.190690	10	9	50	5.169572	6
25	10	27	6	5.190021	10	6	13	5.168865	5
26	10	29	12	5.189347	10	2	23	5.168160	4
27	10	31	7	5.188670	9	58	21	5.167457	3
28	10	32	51	5.187989	9	54	6	5.166756	2
29	10	34	24	5.187304	9	49	39	5.166058	1
30	10	35	46	5.186615	9	44	59	5.165366	0
	Sign 9 add.				Sign 8 add.				

Mean Ano.	Sign 4 ſubtract.				Sign 5 ſubtract.				Mean Ano.
	Equation.			Logarithm ♂ à ☉	Equation			Logarithm ♂ à ☉.	
	°	′	″		°	′	″		
0	9	44	59	5.165366	5	54	42	5.147586	30
1	9	40	7	5.164676	5	44	20	5.147142	29
2	9	35	2	5.163990	5	33	50	5.146710	28
3	9	29	45	5.163309	5	23	11	5.146291	27
4	9	24	16	5.162632	5	12	24	5.145885	26
5	9	18	34	5.161960	5	1	29	5.145492	25
6	9	12	40	5.161293	4	50	27	5.145113	24
7	9	6	35	5.160631	4	39	18	5.144747	23
8	9	0	18	5.159975	4	28	2	5.144395	22
9	8	53	50	5.159325	4	16	39	5.144057	21
10	8	47	10	5.158682	4	5	10	5.143734	20
11	8	40	17	5.158045	3	53	34	5.143425	19
12	8	33	11	5.157415	3	41	42	5.143131	18
13	8	25	55	5.156792	3	30	5	5.142852	17
14	8	18	27	5.156177	3	18	11	5.142587	16
15	8	10	46	5.155570	3	6	13	5.142338	15
16	8	2	56	5.154971	2	54	11	5.142104	14
17	7	54	53	5.154380	2	42	4	5.141886	13
18	7	46	40	5.153797	2	29	51	5.141683	12
19	7	38	16	5.153223	2	17	35	5.141496	11
20	7	29	42	5.152659	2	5	16	5.141325	10
21	7	20	57	5.152104	1	52	54	5.141170	9
22	7	12	2	5.151559	1	40	29	5.141031	8
23	7	2	56	5.150024	1	28	2	5.140908	7
24	6	53	39	5.150500	1	15	32	5.140801	6
25	6	44	13	5.149986	1	3	0	5.140711	5
26	6	34	38	5.149483	0	50	26	5.140637	4
27	6	24	53	5.148991	0	37	31	5.140579	3
28	6	14	58	5.148510	0	25	14	5.140538	2
29	6	4	54	5.148043	0	12	37	5.140513	1
30	5	54	42	5.147586	0	0	0	5.140505	0
	Sign 7 add.				Sign 6 add				

A Table *of* Mars's *Inclination*, *with the Reduction from his Orbit to the Ecliptic.*

Argument of Latitude. Reduction ſubtract.

	Si. 0 N, *Si.* 6 S, *Aſc.* Inclination.			*Subtrac* Reduct.		*Si.* 1 N, *Si.* 7 S, *Aſc* Inclination.			*Subtract.* Reduct.		
°	°	′	″	′	″	°	′	″	′	″	°
0	0	0	0	0	0	0	55	31	0	47	30
1	0	1	56	0	1	0	57	10	0	48	29
2	0	3	52	0	3	0	58	49	0	48	28
3	0	5	48	0	5	1	0	26	0	49	27
4	0	7	44	0	7	1	2	3	0	49	26
5	0	9	40	0	9	1	3	40	0	50	25
6	0	11	36	0	11	1	5	14	0	50	24
7	0	13	32	0	13	1	6	47	0	51	23
8	0	15	27	0	15	1	8	20	0	51	22
9	0	17	22	0	16	1	9	51	0	52	21
10	0	19	27	0	18	1	11	22	0	52	20
11	0	21	12	0	20	1	12	51	0	53	19
12	0	23	6	0	22	1	14	19	0	53	18
13	0	24	59	0	24	1	15	45	0	53	17
14	0	26	52	0	26	1	17	9	0	54	16
15	0	28	45	0	28	1	18	33	0	54	15
16	0	30	36	0	30	1	19	54	0	54	14
17	0	32	28	0	32	1	21	13	0	53	13
18	0	34	19	0	33	1	22	31	0	53	12
19	0	36	10	0	35	1	23	49	0	53	11
20	0	37	59	0	36	1	25	4	0	52	10
21	0	39	48	0	37	1	26	18	0	52	9
22	0	41	36	0	38	1	27	30	0	51	8
23	0	43	23	0	39	1	28	41	0	51	7
24	0	45	10	0	41	1	29	50	0	50	6
25	0	46	55	0	42	1	30	58	0	50	5
26	0	48	40	0	43	1	32	3	0	49	4
27	0	50	25	0	44	1	33	7	0	49	3
28	0	52	8	0	45	1	34	10	0	48	2
29	0	53	50	0	46	1	35	10	0	48	1
30	0	55	31	0	47	1	36	9	0	47	0
	Sign 11 S., *Sign* 5 N., *Deſc.*			*Reduct.* *Add.*		*Sign* 10 S., *Sign* 4 N., *Deſc.*			*Reduct.* *Add.*		

Argument of Latitude. Reduction Add.

Argument of Latitude. Reduction ſubtract.

	Sign 2 } *Aſc.* *Sign* 8 } Inclination.			*Subtrac.* *Reduct.*		
	°	'	"	'	"	
0	1	36	9	0	47	30
1	1	37	6	0	46	29
2	1	38	1	0	45	28
3	1	38	56	0	44	27
4	1	39	48	0	43	26
5	1	40	38	0	42	25
6	1	41	27	0	41	24
7	1	42	13	0	39	23
8	1	42	57	0	38	22
9	1	43	40	0	37	21
10	1	44	20	0	36	20
11	1	44	58	0	35	19
12	1	45	35	0	33	18
13	1	46	10	0	32	17
14	1	46	43	0	30	16
15	1	47	14	0	28	15
16	1	47	43	0	26	14
17	1	48	10	0	24	13
18	1	48	26	0	22	12
19	1	48	59	0	20	11
20	1	49	20	0	18	10
21	1	49	39	0	16	9
22	1	49	56	0	15	8
23	1	50	11	0	13	7
24	1	50	24	0	11	6
25	1	50	35	0	9	5
26	1	50	44	0	7	4
27	1	50	51	0	5	3
28	1	50	56	0	3	2
29	1	50	59	0	1	1
30	1	51	0	0	0	0
	Sign 9 } *Deſc.* *Sign* 3 }			*Reduct.* *Add.*		

A TABLE *of* Jupiter's *Mean Motion in Years.*

Years compleat.	Longitude ♃.				Anomaly ♃.				Node ♃.			
	S.	°	′	″	S.	°	′	″	S.	°	′	″
1	1	0	20	38	1	0	19	26	0	0	0	50
2	2	0	41	16	2	0	38	52	0	0	1	40
3	3	1	1	54	3	0	58	18	0	0	2	30
B 4	4	1	27	31	4	1	22	43	0	0	3	20
5	5	1	48	9	5	1	42	9	0	0	4	10
6	6	2	8	47	6	2	1	35	0	0	5	0
7	7	2	29	26	7	2	21	2	0	0	5	50
B 8	8	2	55	3	8	2	45	27	0	0	6	40
9	9	3	15	41	9	3	4	53	0	0	7	30
10	10	3	36	19	10	3	24	19	0	0	8	20
11	11	3	56	57	11	3	43	45	0	0	9	10
B 12	0	4	22	34	0	4	8	10	0	0	10	0
13	1	4	43	13	1	4	27	36	0	0	10	50
14	2	5	3	51	2	4	47	3	0	0	11	40
15	3	5	24	29	3	5	6	29	0	0	12	30
B 16	4	5	50	6	4	5	30	54	0	0	13	20
17	5	6	10	44	5	5	50	20	0	0	14	10
18	6	6	31	22	6	6	9	46	0	0	15	0
19	7	6	52	0	7	6	29	12	0	0	15	50
B 20	8	7	17	38	8	6	53	38	0	0	16	40
40	4	14	35	16	4	13	47	16	0	0	33	20
60	0	21	52	54	0	20	40	54	0	0	50	0
80	8	26	10	32	8	27	34	32	0	1	6	40
100	5	6	28	11	5	4	28	11	0	1	23	20
200	10	12	56	22	10	8	56	22	0	2	46	40
300	3	19	24	33	3	13	24	33	0	4	10	0
400	8	25	52	44	8	17	52	44	0	5	33	20
500	2	2	20	55	1	22	20	55	0	6	56	40
600	7	8	49	6	6	26	49	6	0	8	20	0
700	0	15	17	17	0	1	17	17	0	9	43	20
800	5	21	45	28	5	5	45	28	0	11	6	40
900	10	28	13	39	10	10	13	39	0	12	30	0
1000	4	4	41	50	3	14	41	50	0	13	53	20
2000	8	9	23	40	6	29	23	40	0	27	46	40
3000	0	14	5	30	10	14	5	30	1	11	40	0
4000	4	18	47	20	1	28	47	20	1	23	33	20

Years of Christ.	Longitude ♃.				Anomaly ♃.				Node ♃.			
	S.	°	′	″	S.	°	′	″	S.	°	′	″
1	5	27	10	6	0	21	35	36	2	13	58	20
101	11	3	38	17	5	26	03	47	2	15	21	40
201	4	10	6	28	11	00	31	58	2	16	45	00
301	9	16	34	39	4	05	00	09	2	18	08	20
401	2	23	2	50	9	09	28	20	2	19	31	40
501	7	29	31	1	2	13	56	31	2	20	55	00
601	1	5	59	12	7	18	24	42	2	22	18	20
701	6	12	27	23	0	22	52	53	2	23	41	40
801	11	18	55	34	5	27	21	04	2	25	05	00
901	4	25	23	45	11	01	49	15	2	26	28	20
1001	10	1	51	56	4	06	17	26	2	27	51	40
1101	3	8	20	7	9	10	45	37	2	29	15	00
1201	8	14	48	18	2	15	13	48	3	00	38	20
1301	1	21	16	29	7	19	41	59	3	02	01	40
1401	6	27	44	40	0	24	10	10	3	03	25	00
1501	0	4	12	51	5	28	38	21	3	04	48	20
1601	5	10	41	2	11	03	06	32	3	06	11	40
1701	10	17	9	13	4	07	04	13	3	07	35	00
1801	3	23	37	24	9	12	02	54	3	08	58	20
1901	9	0	5	35	2	16	31	05	3	10	21	40
2001	2	6	33	46	7	20	59	16	3	11	45	00
1678	11	8	44	42	4	29	37	18	3	07	15	50
1679	0	9	5	20	5	29	56	44	3	07	16	40
1680	1	9	25	58	7	00	16	10	3	07	17	30
1681	2	9	51	35	8	00	40	35	3	07	18	20
1682	3	10	12	13	9	01	00	01	3	07	19	10
1683	4	10	32	51	10	01	19	27	3	07	20	00
1684	5	10	53	29	11	01	38	53	3	07	20	50
1685	6	11	19	6	0	02	03	18	3	07	21	40
1686	7	11	39	44	1	02	22	44	3	07	22	30
1687	8	12	0	22	2	02	42	10	3	07	23	20
1688	9	12	21	1	3	03	01	37	3	07	24	10
1689	10	12	46	38	4	03	26	02	3	07	25	00
1690	11	13	7	16	5	03	45	29	3	07	25	50
1691	0	13	27	54	6	04	04	55	3	07	26	40
1692	1	13	48	32	7	04	24	21	3	07	27	30

Years of Christ.	Longitude ♃.				Anomaly ♃.				Node ♃.			
	S.	°	′	″	S.	°	′	″	S.	°	′	″
1693	2	14	14	10	8	04	48	46	3	7	28	20
1694	3	14	34	48	9	05	08	12	3	7	29	10
1695	4	14	55	26	10	05	27	38	3	7	30	00
1696	5	15	16	04	11	05	47	04	3	7	30	50
1697	6	15	41	41	0	06	11	29	3	7	31	40
1698	7	16	02	19	1	06	50	55	3	7	32	30
1699	8	16	22	57	2	06	50	21	3	7	33	20
1700	9	16	43	35	3	07	09	47	3	7	34	10
1701	10	17	09	13	4	07	34	13	3	7	35	00
1702	11	17	29	51	5	07	53	39	3	7	35	50
1703	0	17	50	29	6	08	13	05	3	7	36	40
1704	1	18	11	07	7	08	32	31	3	7	37	30
1705	2	18	36	44	8	08	56	56	3	7	38	20
1706	3	18	57	22	9	09	16	22	3	7	39	10
1707	4	19	18	01	10	09	35	48	3	7	40	00
1708	5	19	38	39	11	09	55	14	3	7	40	50
1709	6	20	04	16	0	10	19	39	3	7	41	40
1710	7	20	24	53	1	10	39	06	3	7	42	30
1711	8	20	45	31	2	10	58	32	3	7	43	20
1712	9	21	06	10	3	11	17	58	3	7	44	10
1713	10	21	31	47	4	11	42	23	3	7	45	00
1714	11	21	52	26	5	12	01	49	3	7	45	50
1715	0	22	13	04	6	11	21	15	3	7	46	40
1716	1	22	33	42	7	12	40	42	3	7	47	30
1717	2	22	59	19	8	13	05	07	3	7	48	20
1718	3	23	19	57	9	13	24	33	3	7	49	10
1719	4	23	40	35	10	13	43	59	3	7	50	00
1720	5	24	01	13	11	14	03	25	3	7	50	50
1721	6	24	26	51	0	14	27	51	3	7	51	40
1722	7	24	47	29	1	14	47	17	3	7	52	30
1723	8	25	08	07	2	15	06	43	3	7	53	20
1724	9	25	28	45	3	15	26	09	3	7	54	10
1725	10	25	54	22	4	15	50	34	3	7	55	00
1726	11	26	15	00	5	16	10	00	3	7	55	50
1727	0	26	35	38	6	16	29	27	3	7	56	40
1728	1	26	56	17	7	16	48	53	3	7	57	30

Years of Christ.	Longitude ♃.				Anomaly ♃.				Node ♃.			
	S.	°	′	″	S	°	′	″	S.	°	′	″
1729	2	27	21	54	8	17	13	18	3	7	58	20
1730	3	27	42	32	9	17	32	44	3	7	59	10
1731	4	28	03	10	10	17	52	10	3	8	00	00
1732	5	28	23	48	0	18	11	36	3	8	00	50
1733	6	28	49	25	1	18	36	01	3	8	01	40
1734	7	29	10	03	2	18	55	28	3	8	02	30
1735	8	29	30	42	3	19	14	54	3	8	03	20
1736	9	29	51	20	4	19	34	20	3	8	04	10
1737	11	0	16	57	5	19	58	45	3	8	05	00
1738	0	0	37	35	6	20	18	11	3	8	05	50
1739	1	0	58	13	7	20	37	37	3	8	06	40
1740	2	1	18	51	8	20	57	03	3	8	07	30
1741	3	1	44	29	8	21	21	29	3	8	08	20
1742	4	2	05	07	9	21	40	55	3	8	09	10
1743	5	2	25	45	10	22	00	21	3	8	10	00
1744	6	2	46	23	11	22	19	47	3	8	10	50
1745	7	3	12	00	0	22	44	12	3	8	11	40
1746	8	3	32	38	1	23	03	38	3	8	12	30
1747	9	3	53	16	2	23	23	04	3	8	13	20
1748	10	4	13	55	3	23	42	31	3	8	14	10
1749	11	4	39	32	4	24	06	56	3	8	15	00
1750	0	5	00	10	5	24	26	22	3	8	15	50
1751	1	5	20	48	6	24	45	48	3	8	16	40
1752	2	5	41	26	7	25	05	14	3	8	17	30
1753	3	6	07	03	8	23	29	39	3	8	18	20
1754	4	6	27	42	9	25	49	06	3	8	19	10
1755	5	6	48	20	10	26	08	32	3	8	20	00
1756	6	7	08	58	11	26	27	58	3	8	20	50
1757	7	7	34	35	0	26	52	23	3	8	21	40
1758	8	7	55	13	1	27	11	49	3	8	22	30
1759	9	8	13	51	2	27	31	15	3	8	23	20
1760	10	8	36	29	3	27	50	41	3	8	24	10
1761	11	9	02	07	4	28	15	07	3	8	25	00
1762	0	9	22	45	5	28	34	33	3	8	25	50
1763	1	9	43	23	6	28	53	59	3	8	26	40
1764	2	10	04	01	7	29	13	25	3	8	27	30

Years of Christ	Longitude ♃.				Anomaly ♃.				Node ♃.			
	S.	°	′	″	S.	°	′	″	S.	°	′	″
1765	03	10	29	38	08	29	37	50	3	8	28	20
1766	04	10	50	16	09	29	57	16	3	8	29	10
1767	05	11	10	55	11	00	16	43	3	8	30	00
1768	06	11	31	33	00	00	36	09	3	8	30	50
1769	07	11	57	10	01	01	00	34	3	8	31	40
1770	08	12	17	48	02	01	20	00	3	8	32	30
1771	09	12	38	26	03	01	39	26	3	8	33	20
1772	10	12	59	04	04	01	58	52	3	8	34	10
1773	11	13	24	41	05	02	23	17	3	8	35	00
1774	00	13	45	20	06	02	42	44	3	8	35	50
1775	01	14	05	58	07	03	02	10	3	8	36	40
1776	02	14	26	36	08	03	21	36	3	8	37	30
1777	03	14	52	13	09	03	46	01	3	8	38	20
1778	04	15	12	51	10	04	05	27	3	8	39	10
1779	05	15	33	29	11	04	24	53	3	8	40	00
1780	06	15	54	07	00	04	44	19	3	8	40	50
1781	07	16	19	45	01	05	08	45	3	8	41	40
1782	08	16	40	23	02	05	28	11	3	8	42	30
1783	09	17	01	01	03	05	47	37	3	8	43	20
1784	10	17	21	39	04	06	07	03	3	8	44	10
1785	11	17	47	16	05	06	31	28	3	8	45	00
1786	00	18	07	54	06	06	50	54	3	8	45	50
1787	01	18	28	32	07	07	10	21	3	8	46	40
1788	02	18	49	10	08	07	29	47	3	8	47	30
1789	03	19	14	48	09	07	54	12	3	8	48	20
1790	04	19	35	26	10	08	13	38	3	8	49	10
1791	05	19	56	04	11	08	33	04	3	8	50	00
1792	06	20	16	42	00	08	52	30	3	8	50	50
1793	07	20	42	19	01	09	16	55	3	8	51	40
1794	08	21	02	57	02	09	36	22	3	8	52	30
1795	09	21	23	36	03	09	55	48	3	8	53	20
1796	10	21	44	14	04	10	15	14	3	8	54	10
1797	11	22	09	51	05	10	39	39	3	8	55	00
1798	00	22	30	29	06	10	59	05	3	8	55	50
1799	01	22	51	07	07	11	18	31	3	8	56	40
1800	02	23	11	45	08	11	37	57	3	8	57	30

Years of Chriſt.	Longitude ♃.				Anomaly ♃.				Node ♃.			
	S.	°	′	″	S.	°	′	″	S.	°	′	″
1801	3	23	37	23	9	12	2	23	3	8	58	20
1802	4	23	58	1	10	12	21	49	3	8	59	10
1803	5	24	18	39	11	12	41	15	3	9	0	0
1804	6	24	39	17	0	13	0	41	3	9	0	50
1805	7	25	4	54	1	13	25	6	3	9	1	40
1806	8	25	25	32	2	13	44	32	3	9	2	30
1807	9	25	46	10	3	14	3	59	3	9	3	20
1808	10	26	6	48	4	14	23	25	3	9	4	10
1809	11	26	32	26	5	14	47	50	3	9	5	0
1810	0	26	53	4	6	15	7	16	3	9	5	50
1811	1	27	13	42	7	15	26	42	3	9	6	40
1812	2	27	34	20	8	15	46	8	3	9	7	30
1813	3	27	59	57	9	16	10	34	3	9	8	20
1814	4	28	20	35	10	16	30	0	3	9	9	10
1815	5	28	41	13	11	16	49	26	3	9	10	0
1816	6	29	1	51	0	17	8	52	3	9	10	50
1817	7	29	27	29	1	17	33	17	3	9	11	40
1818	8	29	48	7	2	17	52	43	3	9	12	30
1819	10	0	8	45	3	18	12	9	3	9	13	20
1820	11	0	29	23	4	18	31	35	3	9	14	10
1821	0	0	55	1	5	18	56	1	3	9	15	0
1822	1	1	15	39	6	19	25	27	3	9	15	50
1823	2	1	36	17	7	19	34	53	3	9	16	40
1824	3	1	56	55	8	19	54	19	3	9	17	30
1825	4	2	22	32	9	20	18	44	3	9	18	20
1826	5	2	43	10	10	20	38	10	3	9	19	10
1827	6	3	3	48	11	20	57	37	3	9	20	0
1828	7	3	24	27	0	21	17	3	3	9	20	50
1829	8	3	50	4	1	21	41	28	3	9	21	40
1830	9	4	10	42	2	22	0	54	3	9	22	30
1831	10	4	31	20	3	22	20	20	3	9	23	20
1832	11	4	51	58	4	22	39	46	3	9	24	10
1833	0	5	17	35	5	23	4	12	3	9	25	0
1834	1	5	38	13	6	23	23	38	3	9	25	50
1835	2	5	58	52	7	23	43	4	3	9	26	40
1836	3	6	19	30	8	24	2	30	3	9	27	30

Common Year.	JANUARY.						Bissextile.
	Longitude ♃.			Anomaly ♃.			
	°	'	"	°	'	"	
1	0	4	59	0	4	59	0
2	0	9	59	0	9	59	1
3	0	14	58	0	14	58	2
4	0	19	57	0	19	57	3
5	0	24	56	0	24	56	4
6	0	29	56	0	29	55	5
7	0	34	55	0	34	54	6
8	0	39	54	0	39	53	7
9	0	44	53	0	44	52	8
10	0	49	53	0	49	51	9
11	0	54	52	0	54	50	10
12	0	59	51	0	59	49	11
13	1	4	50	1	4	48	12
14	1	9	50	1	9	48	13
15	1	14	49	1	14	46	14
16	1	19	48	1	19	45	15
17	1	24	48	1	24	45	16
18	1	29	47	1	29	44	17
19	1	34	46	1	34	43	18
20	1	39	45	1	39	41	19
21	1	44	45	1	44	41	20
22	1	49	44	1	49	40	21
23	1	54	43	1	54	39	22
24	1	59	42	1	59	38	23
25	2	4	42	2	4	37	24
26	2	9	41	2	9	36	25
27	2	14	40	2	14	35	26
28	2	19	39	2	19	34	27
29	2	24	39	2	24	34	28
30	2	29	38	2	29	32	29
31	2	34	38	2	34	32	30

Common Year.	FEBRUARY.								Bissextile.
	Longitude ♃.				Anomaly ♃.				
	S.	°	′	″	S.	°	′	″	
1	0	2	39	37	0	2	39	31	0
2	0	2	44	37	0	2	44	31	1
3	0	2	49	36	0	2	49	30	2
4	0	2	54	35	0	2	54	28	3
5	0	2	59	34	0	2	59	27	4
6	0	3	4	34	0	3	4	27	5
7	0	3	9	33	0	3	9	26	6
8	0	3	14	32	0	3	14	26	7
9	0	3	19	31	0	3	19	24	8
10	0	3	24	31	0	3	24	23	9
11	0	3	29	30	0	3	29	23	10
12	0	3	24	29	0	3	34	21	11
13	0	3	39	28	0	3	39	21	12
14	0	3	44	28	0	3	44	20	13
15	0	3	49	27	0	3	49	19	14
16	0	3	54	26	0	3	54	18	15
17	0	3	59	26	0	3	59	17	16
18	0	4	4	25	0	4	4	16	17
19	0	4	9	24	0	4	9	15	18
20	0	4	14	23	0	4	14	14	19
21	0	4	19	23	0	4	19	13	20
22	0	4	24	22	0	4	24	12	21
23	0	4	29	21	0	4	29	11	22
24	0	4	34	20	0	4	34	10	23
25	0	4	39	20	0	4	39	10	24
26	0	4	44	19	0	4	44	9	25
27	0	4	49	18	0	4	49	8	26
28	0	4	54	17	0	4	54	7	27
29	0	4	59	17	0	4	59	6	28
30									29
31									30

M A R C H.

Common Year.	Longitude ♃.				Anomaly ♃.				Bissextile.
	S.	°	′	″	S.	°	′	″	
1	0	4	59	17	0	4	59	6	0
2	0	5	4	17	0	5	4	5	1
3	0	5	9	16	0	5	9	4	2
4	0	5	14	15	0	5	14	3	3
5	0	5	19	14	0	5	19	2	4
6	0	5	24	14	0	5	24	1	5
7	0	5	29	13	0	5	29	0	6
8	0	5	34	12	0	5	33	59	7
9	0	5	39	11	0	5	38	58	8
10	0	5	44	11	0	5	44	57	9
11	0	5	49	10	0	5	48	56	10
12	0	5	54	9	0	5	53	55	11
13	0	5	59	8	0	5	58	54	12
14	0	6	4	8	0	6	3	54	13
15	0	6	9	7	0	6	8	53	14
16	0	6	14	6	0	6	13	52	15
17	0	6	19	6	0	6	18	51	16
18	0	6	24	5	0	6	23	50	17
19	0	6	29	4	0	6	28	49	18
20	0	6	34	3	0	6	33	48	19
21	0	6	39	3	0	6	39	47	20
22	0	6	44	2	0	6	43	46	21
23	0	6	49	1	0	6	48	45	22
24	0	6	54	0	0	6	53	44	23
25	0	6	59	0	0	6	58	43	24
26	0	7	3	59	0	7	3	42	25
27	0	7	8	58	0	7	8	41	26
28	0	7	13	58	0	7	13	41	27
29	0	7	18	57	0	7	18	40	28
30	0	7	23	56	0	7	23	39	29
31	0	7	28	56	0	7	28	38	30

APRIL.

Common Year.	Longitude ♃. S.	°	′	″	Anomaly ♃. S.	°	′	″	Biſſextile.
1	0	7	33	54	0	7	33	35	0
2	0	7	38	54	0	7	38	35	1
3	0	7	43	53	0	7	43	34	2
4	0	7	48	52	0	7	48	33	3
5	0	7	53	51	0	7	53	32	4
6	0	7	58	51	0	7	58	31	5
7	0	8	3	50	0	8	3	30	6
8	0	8	8	49	0	8	8	29	7
9	0	8	13	48	0	8	13	28	8
10	0	8	18	47	0	8	18	27	9
11	0	8	23	46	0	8	23	26	10
12	0	8	28	46	0	8	28	25	11
13	0	8	33	45	0	8	33	24	12
14	0	8	38	45	0	8	38	23	13
15	0	8	43	44	0	8	43	22	14
16	0	8	48	44	0	8	48	22	15
17	0	8	53	43	0	8	53	21	16
18	0	8	58	42	0	8	58	20	17
19	0	9	3	42	0	9	3	20	18
20	0	9	8	41	0	9	8	19	19
21	0	9	13	40	0	9	13	18	20
22	0	9	18	39	0	9	18	17	21
23	0	9	23	38	0	9	23	16	22
24	0	9	28	37	0	9	28	15	23
25	0	9	33	37	0	9	33	14	24
26	0	9	38	36	0	9	38	13	25
27	0	9	43	35	0	9	43	12	26
28	0	9	48	35	0	9	48	11	27
29	0	9	53	34	0	9	53	10	28
30	0	9	58	33	0	9	58	9	29
31	0	10	3	33	0	10	3	9	30

MAY.

Common Year.	Longitude ♃.				Anomaly ♃.				Bissextile.
||	S.	°	'	''	S.	°	'	''	||
1	0	10	3	33	0	10	3	9	0
2	0	10	8	32	0	10	8	8	1
3	0	10	13	31	0	10	13	7	2
4	0	10	18	30	0	10	18	6	3
5	0	10	23	29	0	10	23	5	4
6	0	10	28	29	0	10	28	4	5
7	0	10	33	28	0	10	33	3	6
8	0	10	38	27	0	10	38	2	7
9	0	10	43	26	0	10	43	1	8
10	0	10	48	26	0	10	48	0	9
11	0	10	53	25	0	10	52	59	10
12	0	10	58	24	0	10	57	58	11
13	0	11	3	23	0	11	2	57	12
14	0	11	8	23	0	11	7	56	13
15	0	11	13	22	0	11	12	55	14
16	0	11	18	21	0	11	17	54	15
17	0	11	23	21	0	11	22	53	16
18	0	11	28	20	0	11	27	52	17
19	0	11	33	19	0	11	32	51	18
20	0	11	38	18	0	11	37	50	19
21	0	11	43	18	0	11	42	50	20
22	0	11	48	17	0	11	47	49	21
23	0	11	53	16	0	11	52	48	22
24	0	11	58	15	0	11	57	47	23
25	0	12	3	15	0	12	2	46	24
26	0	12	8	14	0	12	7	45	25
27	0	12	13	13	0	12	12	44	26
28	0	12	18	13	0	12	17	43	27
29	0	12	23	12	0	12	23	42	28
30	0	12	28	11	0	12	28	41	29
31	0	12	33	11	0	12	33	41	30

JUNE.

Common Year.	Longitude ♃.				Anomaly ♃.				Biſſextile.
	S.	°	'	"	S.	°	'	"	
1	0	12	38	10	0	12	37	39	0
2	0	12	43	10	0	12	42	39	1
3	0	12	48	9	0	12	47	38	2
4	0	12	53	8	0	12	52	37	3
5	0	12	58	7	0	12	57	36	4
6	0	13	3	7	0	13	2	35	5
7	0	13	8	6	0	13	7	34	6
8	0	13	13	5	0	13	12	33	7
9	0	13	18	4	0	13	17	32	8
10	0	13	23	4	0	13	22	31	9
11	0	13	28	3	0	13	27	30	10
12	0	13	33	2	0	13	32	29	11
13	0	13	38	1	0	13	37	28	12
14	0	13	43	1	0	13	42	27	13
15	0	13	48	0	0	13	47	26	14
16	0	13	52	59	0	13	52	25	15
17	0	13	57	59	0	13	57	24	16
18	0	14	2	58	0	14	2	23	17
19	0	14	7	57	0	14	7	22	18
20	0	14	12	56	0	14	12	21	19
21	0	14	17	56	0	14	17	20	20
22	0	14	22	55	0	14	22	20	21
23	0	14	27	54	0	14	27	19	22
24	0	14	32	53	0	14	32	18	23
25	0	14	37	53	0	14	37	17	24
26	0	14	42	52	0	14	42	16	25
27	0	14	47	51	0	14	47	15	26
28	0	14	52	51	0	14	52	14	27
29	0	14	57	50	0	14	57	13	28
30	0	15	2	49	0	15	2	12	29
31	0	15	7	48	0	15	7	11	30

Common Year.	JULY.								*Bissextile.*
	Longitude ♃.				Anomaly ♃.				
	S.	°	'	"	S.	°	'	"	
1	0	15	7	48	0	15	7	11	0
2	0	15	12	47	0	15	12	10	1
3	0	15	17	47	0	15	17	10	2
4	0	15	22	46	0	15	22	9	3
5	0	15	27	45	0	15	27	8	4
6	0	15	32	45	0	15	32	7	5
7	0	15	37	44	0	15	37	6	6
8	0	15	42	43	0	15	42	5	7
9	0	15	47	42	0	15	47	4	8
10	0	15	52	42	0	15	52	3	9
11	0	15	57	41	0	15	57	2	10
12	0	16	2	40	0	16	2	1	11
13	0	16	7	39	0	16	7	0	12
14	0	16	12	39	0	16	12	0	13
15	0	16	17	38	0	16	26	59	14
16	0	16	22	37	0	16	21	58	15
17	0	16	27	37	0	16	26	57	16
18	0	16	32	36	0	16	31	56	17
19	0	16	37	35	0	16	36	55	18
20	0	16	42	34	0	16	41	54	19
21	0	16	47	34	0	16	46	53	20
22	0	16	52	33	0	16	51	52	21
23	0	16	57	32	0	16	56	51	22
24	0	17	2	31	0	17	1	50	23
25	0	17	7	31	0	17	6	50	24
26	0	17	12	30	0	17	11	49	25
27	0	17	17	29	0	17	16	48	26
28	0	17	22	29	0	17	21	47	27
29	0	17	27	28	0	17	26	46	28
30	0	17	32	27	0	17	31	45	29
31	0	17	37	27	0	17	36	45	30

AUGUST.

Common Year.	Longitude ♃.				Anomaly ♃.				Biſſextile.
	S.	°	′	″	S.	°	′	″	
1	0	17	42	26	0	17	41	44	0
2	0	17	47	26	0	17	46	43	1
3	0	17	52	25	0	17	51	42	2
4	0	17	57	24	0	17	57	41	3
5	0	18	2	23	0	18	1	40	4
6	0	18	7	23	0	18	6	40	5
7	0	18	12	22	0	18	11	39	6
8	0	18	17	21	0	18	16	37	7
9	0	18	22	20	0	18	21	36	8
10	0	18	27	20	0	18	26	35	9
11	0	18	32	19	0	18	31	35	10
12	0	18	37	18	0	18	36	34	11
13	0	18	42	17	0	18	41	43	12
14	0	18	47	17	0	18	46	32	13
15	0	18	52	16	0	18	51	31	14
16	0	18	57	15	0	18	56	30	15
17	0	19	2	15	0	19	1	29	16
18	0	19	7	14	0	19	6	28	17
19	0	19	12	13	0	19	11	27	18
20	0	19	17	12	0	19	16	26	19
21	0	19	22	12	0	19	21	25	20
22	0	19	27	12	0	19	26	24	21
23	0	19	32	10	0	19	31	23	22
24	0	19	37	9	0	19	36	22	23
25	0	19	42	9	0	19	41	21	24
26	0	19	47	8	0	19	46	21	25
27	0	19	52	7	0	19	51	20	26
28	0	19	57	7	0	19	56	20	27
29	0	20	2	6	0	20	1	19	28
30	0	20	7	5	0	20	6	18	29
31	0	20	12	5	0	20	11	17	30

SEPTEMBER.

Common Year.	Longitude ♃.				Anomaly ♃.				Biſſextile.
‖	S.	°	′	″	S.	°	′	″	‖
1	0	20	17	4	0	20	16	15	0
2	0	20	22	4	0	20	21	15	1
3	0	20	27	3	0	20	46	14	2
4	0	20	32	2	0	20	31	13	3
5	0	20	37	1	0	20	36	12	4
6	0	20	42	1	0	20	41	11	5
7	0	20	47	0	0	20	46	10	6
8	0	20	51	59	0	20	51	9	7
9	0	20	56	58	0	20	56	8	8
10	0	21	1	58	0	21	1	7	9
11	0	21	6	57	0	21	6	6	10
12	0	21	11	56	0	21	11	5	11
13	0	21	16	55	0	21	16	4	12
14	0	21	21	55	0	21	21	3	13
15	0	21	26	54	0	21	26	2	14
16	0	21	31	53	0	21	31	1	15
17	0	21	36	53	0	21	36	0	16
18	0	21	41	52	0	21	41	0	17
19	0	21	46	51	0	21	45	59	18
20	0	21	51	50	0	21	50	58	19
21	0	21	56	50	0	21	55	57	20
22	0	22	1	49	0	22	0	56	21
23	0	22	6	48	0	22	0	55	22
24	0	22	11	47	0	22	10	54	23
25	0	22	16	47	0	22	15	53	24
26	0	22	21	46	0	22	20	52	25
27	0	22	26	45	0	22	25	51	26
28	0	22	31	45	0	22	30	50	27
29	0	22	36	44	0	22	35	49	28
30	0	22	41	43	0	22	40	49	29
31	0	22	46	43	0	22	45	48	30

OCTOBER.

Common Year.	Longitude ♃.				Anomaly ♃.				Biffextile.
	S.	°	′	″	S.	°	′	″	
1	0	22	46	43	0	22	45	48	0
2	0	22	51	43	0	22	50	48	1
3	0	22	56	42	0	22	55	47	2
4	0	23	1	41	0	23	0	46	3
5	0	23	6	40	0	23	5	45	4
6	0	23	11	39	0	23	10	44	5
7	0	23	16	38	0	23	15	43	6
8	0	23	21	37	0	23	20	42	7
9	0	23	26	37	0	23	25	41	8
10	0	23	31	36	0	23	30	40	9
11	0	23	36	35	0	23	35	39	10
12	0	23	41	35	0	23	40	39	11
13	0	23	46	34	0	23	45	38	12
14	0	23	51	34	0	23	50	37	13
15	0	23	56	33	0	23	55	36	14
16	0	24	1	32	0	24	0	35	15
17	0	24	6	32	0	24	5	34	16
18	0	24	11	31	0	24	10	33	17
19	0	24	16	30	0	24	15	32	18
20	0	24	21	29	0	24	20	31	19
21	0	24	26	29	0	24	25	30	20
22	0	24	31	28	0	24	30	29	21
23	0	24	36	27	0	24	35	28	22
24	0	24	41	26	0	24	40	27	23
25	0	24	46	26	0	24	45	27	24
26	0	24	51	25	0	24	50	26	25
27	0	24	56	24	0	24	55	25	26
28	0	25	1	24	0	25	0	24	27
29	0	25	6	23	0	25	5	23	28
30	0	25	11	22	0	25	10	21	29
31	0	25	16	22	0	25	15	21	30

NOVEMBER.

Common Year.	Longitude ♃.				Anomaly ♃.				Biſſextile.
	S.	°	'	''	S.	°	'	''	
1	0	25	21	21	0	25	20	20	0
2	0	25	26	21	0	25	25	20	1
3	0	25	21	20	0	25	30	19	2
4	0	25	36	19	0	25	35	18	3
5	0	25	41	18	0	25	40	16	4
6	0	25	46	18	0	25	45	16	5
7	0	25	51	17	0	25	50	15	6
8	0	25	56	16	0	25	55	14	7
9	0	26	1	15	0	26	0	13	8
10	0	26	6	15	0	26	5	12	9
11	0	26	11	14	0	26	10	11	10
12	0	26	16	13	0	26	15	10	11
13	0	26	21	12	0	26	20	9	12
14	0	26	26	12	0	26	25	8	13
15	0	26	31	11	0	26	30	7	14
16	0	26	36	10	0	26	35	6	15
17	0	26	41	10	0	26	40	6	16
18	0	26	46	9	0	26	45	5	17
19	0	26	51	8	0	26	50	4	18
20	0	26	56	7	0	26	55	3	19
21	0	27	1	7	0	27	0	2	20
22	0	27	6	6	0	27	5	1	21
23	0	27	11	5	0	27	10	0	22
24	0	27	16	4	0	27	14	59	23
25	0	27	21	4	0	27	19	58	24
26	0	27	26	3	0	27	24	57	25
27	0	27	31	2	0	27	29	56	26
28	0	27	36	2	0	27	34	56	27
29	0	27	41	1	0	27	39	55	28
30	0	27	46	0	0	27	44	54	29
31	0	27	51	0	0	27	49	53	30

DECEMBER.

Common Year.	Longitude ♃.				Anomaly ♃.				Biſſextile.
	S.	°	′	″	S.	°	′	″	
1	0	27	51	0	0	27	49	53	0
2	0	27	55	59	0	27	54	52	1
3	0	28	0	58	0	27	59	51	2
4	0	28	5	57	0	28	4	50	3
5	0	28	10	56	0	28	9	49	4
6	0	28	15	56	0	28	14	48	5
7	0	28	20	55	0	28	19	47	6
8	0	28	25	54	0	28	24	46	7
9	0	28	30	53	0	28	29	45	8
10	0	28	35	53	0	28	34	44	9
11	0	28	40	52	0	28	39	43	10
12	0	28	45	51	0	28	44	42	11
13	0	28	50	50	0	28	49	41	12
14	0	28	55	50	0	28	54	40	13
15	0	29	0	49	0	28	59	39	14
16	0	29	5	48	0	29	4	38	15
17	0	29	10	48	0	29	9	37	16
18	0	29	15	47	0	29	14	36	17
19	0	29	20	46	0	29	19	35	18
20	0	29	25	45	0	29	24	34	19
21	0	29	30	45	0	29	29	33	20
22	0	29	35	44	0	29	34	32	21
23	0	29	40	43	0	29	39	31	22
24	0	29	45	42	0	29	44	30	23
25	0	29	50	42	0	29	49	30	24
26	0	29	55	41	0	25	54	29	25
27	1	0	0	40	0	29	59	28	26
28	1	0	5	40	1	0	4	27	27
29	1	0	0	39	1	0	9	27	28
30	1	0	5	38	1	0	14	26	29
31	1	0	10	38	1	0	19	26	30

H.	Long. ♃			Anom. ♃			H.	Long. ♃			Anom. ♃		
	°	'	''	°	'	''		°	'	''	°	'	''
'	'	''	'''	'	''	'''	'	'	''	'''	'	''	'''
''	''	'''	''''	''	'''	''''	''	''	'''	''''	''	'''	''''
1	0	0	12	0	0	12	31	0	6	27	0	6	27
2	0	0	25	0	0	25	32	0	6	40	0	6	40
3	0	0	37	0	0	37	33	0	6	52	0	6	52
4	0	0	50	0	0	50	34	0	7	5	0	7	5
5	0	1	2	0	1	2	35	0	7	17	0	7	17
6	0	1	15	0	1	15	36	0	7	30	0	7	30
7	0	1	27	0	1	27	37	0	7	42	0	7	42
8	0	1	40	0	1	40	38	0	7	55	0	7	55
9	0	1	52	0	1	52	39	0	8	7	0	8	7
10	0	2	5	0	2	5	40	0	8	20	0	8	20
11	0	2	17	0	2	17	41	0	8	32	0	8	32
12	0	2	30	0	2	30	42	0	8	44	0	8	44
13	0	2	42	0	2	42	43	0	8	57	0	8	57
14	0	2	55	0	2	55	44	0	9	9	0	9	9
15	0	3	7	0	3	7	45	0	9	22	0	9	22
16	0	3	20	0	3	20	46	0	9	34	0	9	34
17	0	3	32	0	3	32	47	0	9	47	0	9	47
18	0	3	44	0	3	44	48	0	9	59	0	9	59
19	0	3	57	0	3	57	49	0	10	12	0	10	12
20	0	4	9	0	4	9	50	0	10	24	0	10	24
21	0	4	22	0	4	22	51	0	10	37	0	10	37
22	0	4	34	0	4	34	52	0	10	50	0	10	50
23	0	4	47	0	4	47	53	0	11	2	0	11	2
24	0	4	59	0	4	59	54	0	11	15	0	11	15
25	0	5	12	0	5	12	55	0	11	27	0	11	27
26	0	5	24	0	5	24	56	0	11	40	0	11	40
27	0	5	37	0	5	37	57	0	11	52	0	11	52
28	0	5	50	0	5	50	58	0	12	5	0	12	5
29	0	6	2	0	6	2	59	0	12	17	0	12	17
30	0	6	15	0	6	15	60	0	12	30	0	12	30

Mean Ano.	Sign 0 ſubtract.				Sign 1 ſubtract.				*Mean Ano.*
	Equation.			Logar. ♃ à ☉.	*Equation.*			*Logarith.* ♃ *à* ☉	
	°	′	″		°	′	″		
0	0	0	0	5.736537	2	37	29	5.734080	30
1	0	5	28	5.736534	2	42	17	5.733916	29
2	0	10	55	5.736526	2	47	3	5.733747	28
3	0	16	22	5.736512	2	51	47	5.733573	27
4	0	21	49	5.736493	2	56	28	5.733394	26
5	0	27	16	5.736498	3	1	6	5.733210	25
6	0	32	42	5.736437	3	5	41	5.733021	24
7	0	38	8	5.736401	3	10	13	5.732827	23
8	0	43	33	5.736360	3	14	42	5.732629	22
9	0	48	57	5.736313	3	19	9	5.732426	21
10	0	54	21	5.736260	3	23	33	5.732218	20
11	0	59	34	5.736202	3	27	54	5.732006	19
12	1	5	5	5.736139	3	32	11	5.731789	18
13	1	10	26	5.736070	3	36	24	5.731567	17
14	1	15	46	5.735996	3	40	34	5.731341	16
15	1	21	4	5.735961	3	44	40	5.731110	15
16	1	26	21	5.735831	3	48	43	5.730875	14
17	1	31	37	5.735740	3	52	42	5.730635	13
18	1	36	52	5.735644	3	56	37	5.730391	12
19	1	42	5	5.735542	4	0	28	5.730143	11
20	1	47	17	5.735435	4	4	16	5.729890	10
21	1	52	27	5.735324	4	8	0	5.729633	9
22	1	57	35	5.735207	4	11	40	5.729372	8
23	2	2	41	5.735084	4	15	15	5.729107	7
24	2	7	45	5.734956	4	18	46	5.728838	6
25	2	12	47	5.734823	4	22	13	5.728565	5
26	2	17	48	5.734685	4	25	36	5.728288	4
27	2	22	47	5.734541	4	28	54	5.728008	3
28	2	27	44	5.734392	4	32	8	5.727724	2
29	2	32	38	5.734238	4	35	17	5.727436	1
30	2	37	29	5.734080	4	38	22	5.727144	0

Sign 11 Add.   Sign 10 Add.

Mean Ano.	Sign 2 ſubtract.				Sign 3 ſubtract.				Mean Ano.
	Equation.			*Logarith.* ♃ *à* ☉	Equation			*Logarithm* ♃ *à* ☉.	
	°	′	″		°	′	″		
0	4	38	22	5.727144	5	31	0	5.717093	30
1	4	41	23	5.726848	5	31	18	5.716729	29
2	4	44	19	5.726549	5	31	30	5.716364	28
3	4	47	10	5.726247	5	31	36	5.715999	27
4	4	49	57	5.725942	5	31	36	5.715633	26
5	4	52	39	5.725633	5	31	30	5.715266	25
6	4	55	15	5.725321	5	31	18	5.714899	24
7	4	57	46	5.725006	5	31	0	5.714532	23
8	5	0	12	5.724688	5	30	35	5.714165	22
9	5	2	33	5.724367	5	30	4	5.713798	21
10	5	4	50	5.724043	5	29	27	5.713431	20
11	5	7	1	5.723716	5	28	44	5.713064	19
12	5	9	7	5.723386	5	27	55	5.712697	18
13	5	11	7	5.723053	5	27	0	5.712331	17
14	5	13	2	5.722718	5	25	58	5.711965	16
15	5	14	52	5.722382	5	24	50	5.711600	15
16	5	16	36	5.722043	5	23	36	5.711236	14
17	5	18	15	5.721701	5	22	16	5.710837	13
18	5	19	48	5.721357	5	20	50	5.710511	12
19	5	21	15	5.721011	5	19	17	5.710150	11
20	5	22	37	5.720663	5	17	39	5.709791	10
21	5	23	54	5.720313	5	15	55	5.709433	9
22	5	25	5	5.719961	5	14	5	5.709076	8
23	5	26	10	5.719607	5	12	8	5.708720	7
24	5	27	10	5.719252	5	10	4	5.708366	6
25	5	28	4	5.718895	5	7	54	5.708013	5
26	5	28	51	5.718536	5	5	39	5.707665	4
27	5	29	32	5.718177	5	3	18	5.707318	3
28	5	30	7	5.717816	5	0	52	5.706973	2
29	5	30	36	5.717455	4	58	19	5.706630	1
30	5	31	0	5.717093	4	55	40	5.706290	0

Sign 9 add. Sign 8 add.

Mean Ano.	Sign 4 ſubtract.				Sign 5 ſubtract.				Mean Ano.
	Equation.			Logarithm ♃ à ☉	Equation.			Logarithm ♃ a ☉.	
	°	′	″		°	′	″		
0	4	55	40	5.706290	2	54	48	5.697840	30
1	4	52	55	5.705952	2	49	36	5.697636	29
2	4	50	4	5.705616	2	44	20	5 697438	28
3	4	47	8	5.705284	2	39	0	5.697246	27
4	4	44	6	5.704955	2	33	36	5.697060	26
5	4	40	59	5.704630	2	28	9	5.696880	25
6	4	37	46	5.704307	2	22	39	5.696707	24
7	4	34	27	5.703988	2	17	6	5.696540	23
8	4	31	2	5.703672	2	11	30	5.696380	22
9	4	27	32	5.703360	2	5	51	5.696227	21
10	4	23	56	5.703052	1	0	9	5.696080	20
11	4	20	15	5.702748	1	54	26	5.695940	19
12	4	16	29	5.702447	1	48	40	5.695807	18
13	4	12	37	5.702150	1	42	51	5.695680	17
14	4	8	40	5.701815	1	37	0	5.695560	16
15	4	4	38	5.701569	1	31	6	5.695447	15
16	4	0	32	5.701286	1	35	10	5.695342	14
17	3	56	21	5.701007	1	19	12	5.695244	13
18	3	54	4	5.700732	1	13	13	5.695152	12
19	3	47	12	5.700462	1	7	13	5.695067	11
20	3	43	15	5.700197	1	1	11	5.694992	10
21	3	38	44	5.699938	0	55	8	5.694920	9
22	3	34	9	5.699683	0	49	3	5.694858	8
23	3	29	29	5.699433	0	42	58	5.694803	7
24	3	24	44	5.699189	0	36	52	5.694755	6
25	3	19	55	5.698950	0	30	45	5.694713	5
26	3	15	2	5.698716	0	24	37	5.694680	4
27	3	10	5	5.698488	0	18	28	5.694655	3
28	3	5	3	5.698266	0	12	19	5.694637	2
29	2	59	57	5.698050	0	6	10	5.694626	1
30	2	54	48	5.697840	0	0	0	5.6946 2	0
	Sign 7 add.				Sign 6 add				

A TABLE *of* Jupiter's *Inclination*, *with the* Reduction *from his Orbit to the Ecliptic.*

Argument of Latitude. Reduction ſubtract.

	Si. 0 N } *Si.* 6 S } *Aſc.*			*Subtrac*		*Si.* 1 N } *Si.* 7 S } *Aſc*			*Subtract.*		
	Inclination.			*Reduct.*		Inclination.			*Reduct.*		
°	°	'	"	'	"	°	'	"	'	"	°
0	0	0	0	0	0	0	40	3	0	24	30
1	0	1	24	0	1	0	41	15	0	25	29
2	0	2	47	0	2	0	42	26	0	25	28
3	0	4	12	0	3	0	43	37	0	25	27
4	0	5	35	0	4	0	44	47	0	25	26
5	0	6	59	0	5	0	45	56	0	26	25
6	0	8	22	0	6	0	47	4	0	26	24
7	0	9	46	0	7	0	48	10	0	26	23
8	0	11	9	0	8	0	49	17	0	26	22
9	0	12	32	0	9	0	50	22	0	26	21
10	0	13	56	0	10	0	51	26	0	27	20
11	0	15	18	0	11	0	52	29	0	27	19
12	0	16	39	0	12	0	53	33	0	27	18
13	0	18	1	0	13	0	54	34	0	27	17
14	0	19	23	0	14	0	55	34	0	27	16
15	0	20	44	0	15	0	56	35	0	27	15
16	0	22	5	0	15	0	57	34	0	27	14
17	0	23	27	0	16	0	58	31	0	27	13
18	0	24	46	0	17	0	59	26	0	27	12
19	0	26	6	0	18	1	0	20	0	27	11
20	0	27	25	0	19	1	1	14	0	27	10
21	0	28	43	0	20	1	2	7	0	26	9
22	0	30	0	0	21	1	2	58	0	26	8
23	0	31	19	0	22	1	3	48	0	26	7
24	0	32	35	0	22	1	4	37	0	26	6
25	0	33	51	0	23	1	5	26	0	26	5
26	0	35	7	0	23	1	6	12	0	25	4
27	0	36	22	0	23	1	6	57	0	25	3
28	0	37	37	0	24	1	7	42	0	25	2
29	0	38	51	0	24	1	8	25	0	25	1
30	0	40	3	0	24	1	9	6	0	24	0
	Sign 11 S. *Sign* 5 N. *Deſc.*			*Reduct.* *Add.*		*Sign* 10 S. } *Sign* 4 N. } *Deſc.*			*Reduct.* *Add.*		

Argument of Latitude. Reduction Add.

	Si. 2N } *Aſc.* *Si. 8 S* Inclination.			*Subtrac.* *Reduct.*		
	°	'	"	'	"	
0	1	9	6	0	24	30
1	1	9	46	0	24	29
2	1	10	25	0	24	28
3	1	11	3	0	23	27
4	1	11	39	0	23	26
5	1	12	14	0	23	25
6	1	12	48	0	22	24
7	1	13	20	0	22	23
8	1	13	52	0	21	22
9	1	14	21	0	21	21
10	1	14	50	0	20	20
11	1	15	17	0	19	19
12	1	15	42	0	18	18
13	1	16	6	0	17	17
14	1	16	28	0	16	16
15	1	16	49	0	15	15
16	1	17	19	0	14	14
17	1	17	27	0	13	13
18	1	17	44	0	12	12
19	1	17	59	0	11	11
20	1	18	12	0	10	10
21	1	18	25	0	9	9
22	1	18	35	0	8	8
23	1	18	45	0	7	7
24	1	18	53	0	6	6
25	1	19	0	0	5	5
26	1	19	5	0	4	4
27	1	19	8	0	3	3
28	1	19	9	0	2	2
29	1	19	10	0	1	1
30	1	19	10	0	0	0

Sign 9 S } *Deſc.* *Reduct.*
Sign 3 N *Add.*

Argument of Latitude. Reduction ſubtract.

A TABLE *of* Saturn's *Mean Motion in Years.*

Years compleat.	Longitude ♄.				Anomaly ♄.				Node ♄.			
	S.	°	′	″	.S	°	′	″	S.	°	′	″
1	0	12	13	21	0	12	12	1	0	0	0	18
2	0	24	26	42	0	24	24	2	0	0	0	36
3	1	6	40	4	1	6	36	4	0	0	0	54
B 4	1	18	55	26	1	18	50	6	0	0	1	12
5	2	1	8	47	2	1	2	7	0	0	1	30
6	2	13	22	9	2	13	14	9	0	0	1	48
7	2	25	35	30	2	25	26	10	0	0	2	6
B 8	3	7	50	52	3	7	40	12	0	0	2	24
9	3	20	4	14	3	19	52	14	0	0	2	42
10	4	2	17	35	4	2	4	15	0	0	3	0
11	4	14	30	56	4	14	16	16	0	0	3	18
B 12	4	26	46	19	4	26	30	19	0	0	3	36
13	5	8	59	40	5	8	42	20	0	0	3	54
14	5	21	13	1	5	20	54	21	0	0	4	12
15	6	3	26	33	6	3	6	23	0	0	4	30
B 16	6	15	41	45	6	15	20	25	0	0	4	48
17	6	27	55	6	6	27	32	26	0	0	5	6
18	7	10	8	28	7	9	44	28	0	0	5	24
19	7	22	21	49	7	21	56	29	0	0	5	42
B 20	8	4	37	12	8	4	10	32	0	0	6	0
40	4	9	14	24	4	8	21	4	0	0	12	0
60	0	13	51	36	0	12	31	36	0	0	18	0
80	8	18	28	48	8	16	42	8	0	0	24	0
100	4	23	6	0	4	20	52	40	0	0	30	0
200	9	16	12	0	9	11	45	20	0	1	0	0
300	2	9	18	0	2	2	38	0	0	1	30	0
400	7	2	24	0	6	23	30	40	0	2	0	0
500	11	25	30	0	11	14	23	20	0	2	30	0
600	4	18	36	0	4	5	16	0	0	3	0	0
700	9	11	42	0	8	26	8	40	0	3	30	0
800	2	4	48	0	1	17	1	20	0	4	0	0
900	6	27	54	0	6	7	54	0	0	4	30	0
1000	11	21	0	0	10	28	46	40	0	5	0	0
2000	11	12	0	0	9	27	33	20	0	10	0	0
3000	21	3	0	0	8	27	20	0	0	15	0	0
4000	10	24	0	0	7	25	6	40	0	20	0	0

Years of Christ	Longitude ♄. S.	°	′	″	Anomaly ♄. S.	°	′	″	Node ♄. S.	°	′	″
1	2	18	47	53	6	27	59	53	3	12	35	24
101	7	11	53	53	11	18	52	33	3	13	5	24
201	0	04	59	53	4	09	45	13	3	13	35	24
301	4	28	05	53	9	00	37	53	3	14	5	24
401	9	21	11	53	1	21	30	33	3	14	35	24
501	2	14	17	53	6	12	23	13	3	15	5	24
601	7	07	23	53	11	03	15	53	3	15	35	24
701	0	00	29	53	3	24	08	33	3	16	5	24
801	4	23	35	53	8	15	01	13	3	16	35	24
901	9	16	41	53	1	05	53	53	3	17	5	24
1001	2	09	47	53	5	26	46	33	3	17	35	24
1101	7	02	53	53	10	17	39	13	3	18	5	24
1201	11	25	59	53	3	08	31	53	3	18	35	24
1301	4	19	05	53	7	29	24	33	3	19	5	24
1401	9	12	11	53	0	20	17	13	3	19	35	24
1501	2	05	17	53	5	11	09	53	3	20	5	24
1601	6	28	23	53	10	02	02	33	3	20	35	24
1701	11	21	29	53	2	22	55	13	3	21	5	24
1801	4	14	35	53	7	13	47	53	3	21	35	24
1901	9	07	41	53	0	04	40	33	3	22	5	24
2001	2	00	47	53	4	25	33	13	3	22	35	24
1678	2	10	10	36	5	12	06	36	3	20	58	30
1679	2	22	23	57	5	24	18	37	3	20	58	48
1680	3	04	37	18	6	06	30	38	3	20	59	6
1681	3	16	52	41	6	18	44	41	3	20	59	24
1682	3	29	06	02	7	00	56	42	3	20	59	42
1683	4	11	19	24	7	18	08	44	3	21	0	0
1684	4	23	32	45	7	25	20	45	3	21	0	18
1685	5	05	48	07	8	07	34	47	3	21	0	36
1686	5	18	01	29	8	19	46	49	3	21	0	54
1687	6	00	14	50	9	01	58	50	3	21	1	12
1688	6	12	28	11	9	14	10	51	3	21	1	30
1689	6	24	43	34	9	26	24	54	3	21	1	48
1690	7	06	56	55	10	08	36	55	3	21	2	6
1691	7	19	10	16	10	20	48	56	3	21	2	24
1692	8	01	23	38	11	03	00	58	3	21	2	42

Years of Christ.	Longitude ♄.				Anomaly ♄.				Node ♄.			
	S.	°	′	″	S.	°	′	″	S.	°	′	″
1693	8	13	39	00	11	15	15	00	3	21	03	00
1694	8	25	52	21	11	27	27	01	3	21	03	18
1695	9	08	05	43	0	09	39	03	3	21	03	36
1696	9	20	19	04	0	21	51	04	3	21	03	54
1697	10	02	34	26	1	04	05	06	3	21	04	12
1698	10	14	47	48	1	16	17	08	3	21	04	30
1699	10	27	01	09	1	28	29	09	3	21	04	48
1700	11	09	14	30	2	10	41	10	3	21	05	06
1701	11	21	29	53	2	22	55	13	3	21	05	24
1702	0	03	43	14	3	05	07	14	3	21	05	42
1703	0	15	56	36	3	07	19	15	3	21	06	00
1704	0	28	09	57	3	29	31	17	3	21	06	18
1705	1	10	25	19	4	11	45	19	3	21	06	36
1706	1	22	38	41	4	23	57	20	3	21	06	54
1707	2	04	52	02	5	06	09	22	3	21	07	12
1708	2	17	05	23	5	18	21	23	3	21	07	30
1709	2	29	20	45	6	00	35	25	3	21	07	48
1710	3	11	34	06	6	12	47	27	3	21	08	06
1711	3	23	47	27	6	24	59	28	3	21	08	24
1712	4	06	00	49	7	07	11	29	3	21	08	42
1713	4	18	16	11	7	19	25	32	3	21	09	00
1714	5	00	29	32	8	01	37	33	3	21	09	18
1715	5	12	42	54	8	13	49	34	3	21	09	36
1716	5	24	56	15	8	26	01	36	3	21	09	54
1717	6	07	11	37	9	08	14	38	3	21	10	12
1718	6	19	25	00	9	20	27	39	3	21	10	30
1719	7	01	38	21	10	02	39	41	3	21	10	48
1720	7	13	51	42	10	14	51	42	3	21	11	06
1721	7	26	07	05	10	27	05	45	3	21	11	24
1722	8	08	20	26	11	09	17	46	3	21	11	42
1723	8	20	33	48	11	21	29	48	3	21	12	00
1724	9	02	47	09	0	03	41	49	3	21	12	18
1725	9	15	02	31	0	15	55	51	3	21	12	36
1726	9	27	15	53	0	28	07	53	3	21	12	54
1727	10	09	29	14	1	10	19	54	3	21	13	12
1728	10	21	42	35	1	22	31	55	3	21	13	30

Years of Christ.	Longitude ♄.				Anomaly ♄.				Node ♄.			
	S.	°	'	"	S.	°	'	"	S.	°	'	"
1729	11	3	57	58	2	04	45	50	3	21	13	48
1730	11	16	11	19	2	16	57	59	3	21	14	06
1731	11	28	24	40	2	29	10	00	3	21	14	24
1732	0	10	38	02	3	11	22	02	3	21	14	42
1733	0	22	53	24	3	23	36	04	3	21	15	00
1734	1	5	06	45	4	05	48	05	3	21	15	18
1735	1	17	20	07	4	18	00	07	3	21	15	36
1736	1	29	33	28	5	00	12	08	3	21	15	54
1737	2	11	48	50	5	12	26	10	3	21	16	12
1738	2	24	02	12	5	24	38	12	3	21	16	30
1739	3	6	15	33	6	06	50	13	3	21	16	48
1740	3	18	28	54	6	19	02	14	3	21	17	06
1741	4	0	44	17	7	01	16	17	3	21	17	24
1742	4	12	57	38	7	13	28	18	3	21	17	42
1743	4	25	11	00	7	25	40	20	3	21	18	00
1744	5	7	24	21	8	07	52	21	3	21	18	18
1745	5	19	39	43	8	20	06	23	3	21	18	36
1746	6	1	53	05	9	02	18	25	3	21	18	54
1747	6	14	06	26	9	14	30	26	3	21	19	12
1748	6	16	19	47	9	26	42	37	3	21	19	30
1749	7	8	35	10	10	08	56	30	3	21	19	48
1750	7	20	48	31	10	21	08	31	3	21	20	06
1751	8	3	01	52	11	03	20	32	3	21	20	24
1752	8	15	15	14	11	15	32	34	3	21	20	42
1753	8	27	30	36	11	27	46	36	3	21	21	00
1754	9	9	43	57	0	09	58	37	3	21	21	18
1755	9	21	57	19	0	22	10	39	3	21	21	36
1756	10	4	10	40	1	04	22	40	3	21	21	54
1757	10	16	26	02	1	16	36	42	3	21	22	12
1758	10	28	39	24	1	28	48	44	3	21	22	30
1759	11	10	52	45	2	11	00	45	3	21	22	48
1760	11	23	06	06	2	23	12	46	3	21	23	06
1761	0	5	21	29	3	05	26	49	3	21	23	24
1762	0	17	34	50	3	17	38	50	3	21	23	42
1763	0	29	48	11	3	29	50	52	3	21	24	00
1764	1	12	01	34	4	12	02	53	3	21	24	18

Years of	Longitude ♄.				Anomaly ♄.				Node ♄.			
Chriſt.	S.	°	′	″	S.	°	′	″	S.	°	′	″
1765	1	24	16	55	4	25	16	55	3	21	24	36
1766	2	06	30	26	5	06	28	57	3	21	24	54
1767	2	18	43	38	5	18	40	58	3	21	25	12
1768	3	00	56	59	6	00	52	59	3	21	25	30
1769	3	13	12	21	6	13	07	1	3	21	25	48
1770	3	25	25	43	6	25	19	2	3	21	26	06
1771	4	07	39	04	7	07	31	3	3	21	26	24
1772	4	19	52	25	7	19	43	5	3	21	26	42
1773	5	02	07	48	8	01	57	7	3	21	27	00
1774	5	14	21	09	8	14	09	8	3	21	27	18
1775	5	06	34	30	8	26	21	10	3	21	27	36
1776	6	08	47	52	9	08	33	11	3	21	27	54
1777	6	21	03	14	9	20	47	13	3	21	28	12
1778	7	03	16	35	10	02	59	15	3	21	28	30
1779	7	15	59	57	10	15	11	16	3	21	28	48
1780	7	27	43	18	10	27	23	17	3	21	29	06
1781	8	09	58	41	11	09	37	21	3	21	29	24
1782	8	22	12	02	11	21	49	22	3	21	29	42
1783	9	04	25	24	0	04	01	24	3	21	30	00
1784	9	16	38	45	0	16	13	25	3	21	30	18
1785	9	28	54	06	0	28	27	27	3	21	30	36
1786	10	11	07	28	1	10	39	29	3	21	30	54
1787	10	13	20	49	1	22	51	30	3	21	31	12
1788	11	05	34	10	2	05	03	31	3	21	31	30
1789	11	17	49	33	2	17	17	34	3	21	31	48
1790	0	00	02	54	2	29	29	35	3	21	32	06
1791	0	12	16	15	3	11	41	36	3	21	32	24
1792	0	24	29	37	3	26	53	38	3	21	32	42
1793	1	06	44	59	4	06	07	40	3	21	33	00
1794	1	18	58	20	4	18	19	41	3	21	33	18
1795	2	01	11	43	5	00	31	43	3	21	33	36
1796	2	13	25	04	5	17	43	44	3	21	33	54
1797	2	25	40	26	5	24	57	46	3	21	34	12
1798	3	07	53	48	6	07	09	48	3	21	34	30
1799	3	20	07	09	6	19	21	49	3	21	34	48
1800	4	02	20	10	7	01	33	50	3	21	35	06

Years of Chriſt.	Longitude ♄.				Anomaly ♄.				Node ♄.			
	S.	°	'	"	S.	°	'	"	S.	°	'	"
1801	4	14	35	53	7	13	47	53	3	21	35	24
1802	4	26	49	14	7	25	59	54	3	21	35	42
1803	5	9	2	35	8	8	11	56	3	21	36	0
1804	5	21	15	57	8	20	23	57	3	21	36	18
1805	6	3	31	19	9	2	37	59	3	21	36	36
1806	6	15	44	40	9	14	50	1	3	21	36	54
1807	6	27	58	2	9	27	2	2	3	21	37	12
1808	7	10	11	23	10	9	14	3	3	21	37	30
1809	7	22	26	45	10	21	28	6	3	21	37	48
1810	8	4	40	7	11	3	40	7	3	21	38	6
1811	8	16	53	28	11	15	52	8	3	21	38	24
1812	8	29	6	49	11	28	4	10	3	21	38	42
1813	9	11	22	12	0	10	18	12	3	21	39	0
1814	9	23	35	33	0	22	30	13	3	21	39	18
1815	10	5	48	54	1	4	42	14	3	21	39	36
1816	10	18	2	16	1	16	54	16	3	21	39	54
1817	11	0	17	38	1	29	8	18	3	21	40	12
1818	11	12	30	59	2	11	20	19	3	21	40	30
1819	11	24	44	21	2	23	32	21	3	21	40	48
1820	0	6	57	42	3	5	44	22	3	21	41	6
1821	0	19	13	5	3	17	58	25	3	21	41	24
1822	1	1	26	26	4	0	10	26	3	21	41	42
1823	1	13	39	47	4	12	22	28	3	21	42	0
1824	1	25	53	9	4	24	34	29	3	21	42	18
1825	2	8	8	31	5	6	48	31	3	21	42	36
1826	2	20	21	52	5	19	0	33	3	21	42	54
1827	3	2	35	14	6	1	12	34	3	21	43	12
1828	3	14	48	35	6	13	24	35	3	21	43	30
1829	3	27	3	57	6	25	38	38	3	21	43	48
1830	4	9	17	19	7	7	50	39	3	21	44	6
1831	4	21	30	40	7	20	2	40	3	21	44	24
1832	5	3	44	1	8	2	14	42	3	21	44	42
1833	5	15	59	24	8	14	28	44	3	21	45	0
1834	5	28	12	45	8	26	40	45	3	21	45	18
1835	6	10	26	6	9	8	52	47	3	21	45	36
1836	6	22	39	28	9	21	4	48	3	21	45	54

Common Year.	JANUARY.								*Biſſextile.*
	Longitude ♄.				Anomaly ♄.				
	S.	°	′	″	S.	°	′	″	
1	0	0	2	1	0	0	2	1	0
2	0	0	4	1	0	0	4	1	1
3	0	0	6	2	0	0	6	2	2
4	0	0	8	2	0	0	8	2	3
5	0	0	10	3	0	0	10	2	4
6	0	0	12	4	0	0	12	3	5
7	0	0	14	4	0	0	14	3	6
8	0	0	16	5	0	0	16	3	7
9	0	0	18	5	0	0	18	4	8
10	0	0	20	6	0	0	20	4	9
11	0	0	22	7	0	0	22	4	10
12	0	0	24	7	0	0	24	5	11
13	0	0	26	8	0	0	26	5	12
14	0	0	28	8	0	0	28	5	13
15	0	0	30	9	0	0	30	6	14
16	0	0	32	9	0	0	32	6	15
17	0	0	34	10	0	0	34	6	16
18	0	0	36	11	0	0	36	7	17
19	0	0	38	11	0	0	38	7	18
20	0	0	40	12	0	0	40	7	19
21	0	0	42	12	0	0	42	7	20
22	0	0	44	13	0	0	44	8	21
23	0	0	46	13	0	0	46	8	22
24	0	0	48	14	0	0	48	8	23
25	0	0	50	14	0	0	50	8	24
26	0	0	52	15	0	0	52	9	25
27	0	0	54	15	0	0	54	9	26
28	0	0	56	16	0	0	56	9	27
29	0	0	58	16	0	0	58	9	28
30	0	1	0	17	0	1	0	10	29
31	0	1	2	17	0	1	2	10	30

FEBRUARY.

Common Year.	Longitude ♄. S.	°	′	″	Anomaly ♄. S.	°	′	″	Biſſextile.
1	0	1	4	18	0	1	4	11	0
2	0	1	6	18	0	1	6	11	1
3	0	1	8	19	0	1	8	12	2
4	0	1	10	19	0	1	10	12	3
5	0	1	12	20	0	1	12	12	4
6	0	1	14	20	0	1	14	13	5
7	0	1	16	21	0	1	16	13	6
8	0	1	18	21	0	1	18	13	7
9	0	1	20	22	0	1	20	14	8
10	0	1	22	23	0	1	22	15	9
11	0	1	24	24	0	1	24	15	10
12	0	1	26	24	0	1	26	15	11
13	0	1	28	25	0	1	28	15	12
14	0	1	30	25	0	1	30	16	13
15	0	1	32	26	0	1	32	16	14
16	0	1	34	26	0	1	34	17	15
17	0	1	36	27	0	1	36	17	16
18	0	1	38	28	0	1	38	17	17
19	0	1	40	28	0	1	40	18	18
20	0	1	42	29	0	1	42	18	19
21	0	1	44	29	0	1	44	18	20
22	0	1	46	30	0	1	46	18	21
23	0	1	48	30	0	1	48	18	22
24	0	1	50	31	0	1	50	19	23
25	0	1	52	31	0	1	52	19	24
26	0	1	54	32	0	1	54	20	25
27	0	1	56	32	0	1	56	20	26
28	0	1	58	33	0	1	58	20	27
29	0	2	0	34	0	2	0	20	28
30									29
31									30

MARCH.

Common Year.	Longitude ♄. S.	°	′	″	Anomaly ♄. S.	°	′	″	Biſſextile.
1	0	2	0	34	0	2	0	20	0
2	0	2	2	34	0	2	2	21	1
3	0	2	4	35	0	2	4	21	2
4	0	2	6	35	0	2	6	21	3
5	0	2	8	26	0	2	8	22	4
6	0	2	10	37	0	2	10	22	5
7	0	2	12	37	0	2	12	22	6
8	0	2	14	38	0	2	14	23	7
9	0	2	16	38	0	2	16	23	8
10	0	2	18	39	0	2	18	24	9
11	0	2	20	40	0	2	20	24	10
12	0	2	22	40	0	2	22	24	11
13	0	2	24	41	0	2	24	25	12
14	0	2	26	41	0	2	26	25	13
15	0	2	28	42	0	2	28	25	14
16	0	2	30	42	0	2	30	26	15
17	0	2	32	43	0	2	32	26	16
18	0	2	34	43	0	2	34	26	17
19	0	2	36	44	0	2	36	27	18
20	0	2	38	44	0	2	38	27	19
21	0	2	40	45	0	2	40	27	20
22	0	2	42	45	0	2	42	27	21
23	0	2	44	46	0	2	44	28	22
24	0	2	46	46	0	2	46	28	23
25	0	2	48	47	0	2	48	28	24
26	0	2	50	48	0	2	50	29	25
27	0	2	52	48	0	2	52	29	26
28	0	2	54	49	0	2	54	29	27
29	0	2	56	49	0	2	56	30	28
30	0	2	58	50	0	2	58	30	29
31	0	3	0	50	0	3	0	30	30

APRIL.

Common Year.	Longitude ♄.				Anomaly ♄.				Biſſextile.
	S.	°	′	″	S.	°	′	″	
1	0	3	2	51	0	3	2	31	0
2	0	3	4	51	0	3	4	31	1
3	0	3	6	52	0	3	6	31	2
4	0	3	8	52	0	3	8	32	3
5	0	3	10	53	0	3	10	32	4
6	0	3	12	54	0	3	12	32	5
7	0	3	14	54	0	3	14	33	6
8	0	3	16	55	0	3	16	33	7
9	0	3	18	55	0	3	18	33	8
10	0	3	20	56	0	3	20	34	9
11	0	3	22	57	0	3	22	34	10
12	0	3	24	57	0	3	24	34	11
13	0	3	26	58	0	3	26	35	12
14	0	3	28	58	0	3	28	35	13
15	0	3	30	59	0	3	30	35	14
16	0	3	32	59	0	3	32	36	15
17	0	3	35	0	0	3	34	36	16
18	0	3	37	1	0	3	36	36	17
19	0	3	39	1	0	3	38	37	18
20	0	3	41	2	0	3	40	37	19
21	0	3	43	2	0	3	42	37	20
22	0	3	45	3	0	3	44	38	21
23	0	3	47	3	0	3	46	38	22
24	0	3	49	4	0	3	48	38	23
25	0	3	51	4	0	3	50	39	24
26	0	3	53	5	0	3	52	39	25
27	0	3	55	5	0	3	54	39	26
28	0	3	57	6	0	3	56	40	27
29	0	3	59	6	0	3	58	40	28
30	0	4	1	7	0	4	0	40	29
31	0	4	3	7	0	4	2	40	30

M A Y.

Common Year.	Longitude ♄.				Anomaly ♄.				Biſſextile.
	S.	°	′	″	S.	°	′	″	
1	0	4	3	7	0	4	2	40	0
2	0	4	5	7	0	4	4	41	1
3	0	4	7	8	0	4	6	41	2
4	0	4	9	8	0	4	8	41	3
5	0	4	11	9	0	4	10	42	4
6	0	4	13	10	0	4	12	42	5
7	0	4	15	11	0	4	14	43	6
8	0	4	17	11	0	4	16	43	7
9	0	4	19	12	0	4	18	44	8
10	0	4	21	13	0	4	20	44	9
11	0	4	23	14	0	4	22	45	10
12	0	4	25	14	0	4	24	45	11
13	0	4	27	15	0	4	26	45	12
14	0	4	29	15	0	4	28	46	13
15	0	4	31	16	0	4	30	46	14
16	0	4	33	16	0	4	32	46	15
17	0	4	35	17	0	4	34	47	16
18	0	4	37	18	0	4	36	47	17
19	0	4	39	18	0	4	38	47	18
20	0	4	41	19	0	4	40	48	19
21	0	4	43	19	0	4	42	48	20
22	0	4	45	20	0	4	44	48	21
23	0	4	47	20	0	4	46	49	22
24	0	4	49	21	0	4	48	49	23
25	0	4	51	21	0	4	50	49	24
26	0	4	53	22	0	4	52	50	25
27	0	4	55	22	0	4	54	50	26
28	0	4	57	23	0	4	56	50	27
29	0	4	59	23	0	4	58	50	28
30	0	5	1	24	0	5	0	51	29
31	0	5	3	24	0	5	2	51	30

Common Year.	JUNE.								Bissextile.
	Longitude ♄.				Anomaly ♄.				
	S.	°	′	″	S.	°	′	″	
1	0	5	5	24	0	5	4	51	0
2	0	5	7	25	0	5	6	51	1
3	0	5	9	25	0	5	8	52	2
4	0	5	11	26	0	5	10	52	3
5	0	5	13	26	0	5	12	52	4
6	0	5	15	27	0	5	14	52	5
7	0	5	17	27	0	5	16	53	6
8	0	5	19	28	0	5	18	53	7
9	0	5	21	28	0	5	20	53	8
10	0	5	23	29	0	5	22	53	9
11	0	5	25	30	0	5	24	54	10
12	0	5	27	30	0	5	26	54	11
13	0	5	29	31	0	5	28	54	12
14	0	5	31	31	0	5	30	54	13
15	0	5	33	32	0	5	32	55	14
16	0	5	35	32	0	5	34	55	15
17	0	5	37	33	0	5	36	56	16
18	0	5	39	34	0	5	38	56	17
19	0	5	41	34	0	5	40	56	18
20	0	5	43	35	0	5	42	57	19
21	0	5	45	35	0	5	44	57	20
22	0	5	47	36	0	5	46	57	21
23	0	5	49	36	0	5	48	57	22
24	0	5	51	37	0	5	50	58	23
25	0	5	53	37	0	5	52	58	24
26	0	5	55	38	0	5	54	58	25
27	0	5	57	38	0	5	56	58	26
28	0	5	59	39	0	5	58	59	27
29	0	6	1	39	0	6	0	59	28
30	0	6	3	40	0	6	2	59	29
31	0	6	5	41	0	6	5	0	30

JULY.

Common Year.	Longitude ♄.				Anomaly ♄.				Biſſextile.
	S.	°	'	''	S.	°	'	''	
1	0	6	5	41	0	6	5	0	0
2	0	6	7	41	0	6	7	0	1
3	0	6	9	42	0	6	9	1	2
4	0	6	11	42	0	6	11	1	3
5	0	6	13	43	0	6	13	2	4
6	0	6	15	44	0	6	15	2	5
7	0	6	17	44	0	6	17	2	6
8	0	6	19	45	0	6	19	3	7
9	0	6	21	45	0	6	21	3	8
10	0	6	23	46	0	6	23	4	9
11	0	6	25	47	0	6	25	4	10
12	0	6	27	47	0	6	27	4	11
13	0	6	29	48	0	6	29	5	12
14	0	6	31	48	0	6	31	5	13
15	0	6	33	49	0	6	33	5	14
16	0	6	35	49	0	6	35	5	15
17	0	6	37	50	0	6	37	6	16
18	0	6	39	51	0	6	39	6	17
19	0	6	41	51	0	6	41	6	18
20	0	6	43	52	0	6	43	7	19
21	0	6	45	52	0	6	45	7	20
22	0	6	47	53	0	6	47	7	21
23	0	6	49	53	0	6	49	8	22
24	0	6	51	54	0	6	51	8	23
25	0	6	53	54	0	6	53	8	24
26	0	6	55	55	0	6	55	9	25
27	0	6	57	55	0	6	57	9	26
28	0	6	59	56	0	6	59	9	27
29	0	7	1	56	0	7	1	9	28
30	0	7	3	57	0	7	3	10	29
31	0	7	5	57	0	7	5	10	30

AUGUST.

Common Year.	Longitude ♄.				Anomaly ♄.				Bissextile.
	S.	°	′	″	S.	°	′	″	
1	0	7	7	58	0	7	7	11	0
2	0	7	9	58	0	7	9	11	1
3	0	7	11	59	0	7	11	11	2
4	0	7	13	59	0	7	13	12	3
5	0	7	16	0	0	7	15	12	4
6	0	7	18	1	0	7	17	12	5
7	0	7	20	1	0	7	19	13	6
8	0	7	22	2	0	7	21	13	7
9	0	7	24	2	0	7	23	13	8
10	0	7	26	3	0	7	25	14	9
11	0	7	28	4	0	7	27	14	10
12	0	7	30	4	0	7	29	14	11
13	0	7	32	5	0	7	31	15	12
14	0	7	34	5	0	7	33	15	13
15	0	7	36	6	0	7	35	15	14
16	0	7	38	6	0	7	37	16	15
17	0	7	40	7	0	7	39	16	16
18	0	7	42	8	0	7	41	16	17
19	0	7	44	8	0	7	43	17	18
20	0	7	46	9	0	7	45	17	19
21	0	7	48	9	0	7	47	17	20
22	0	7	50	10	0	7	49	18	21
23	0	7	52	10	0	7	51	18	22
24	0	7	54	11	0	7	53	18	23
25	0	7	56	11	0	7	55	19	24
26	0	7	58	12	0	7	57	19	25
27	0	8	0	12	0	7	59	19	26
28	0	8	2	13	0	8	1	20	27
29	0	8	4	13	0	8	3	20	28
30	0	8	6	14	0	8	5	20	29
31	0	8	8	14	0	8	7	20	30

SEPTEMBER.

Common Year.	Longitude ♄.				Anomaly ♄.				Bissextile.
	S.	°	′	″	S.	°	′	″	
1	0	8	10	15	0	8	9	21	0
2	0	8	12	15	0	8	11	21	1
3	0	8	14	16	0	8	13	21	2
4	0	8	16	16	0	8	15	21	3
5	0	8	18	17	0	8	17	22	4
6	0	8	20	18	0	8	19	22	5
7	0	8	22	18	0	8	21	22	6
8	0	8	24	19	0	8	23	23	7
9	0	8	26	19	0	8	25	23	8
10	0	8	28	20	0	8	27	23	9
11	0	8	30	21	0	8	29	24	10
12	0	8	32	21	0	8	31	24	11
13	0	8	34	22	0	8	33	24	12
14	0	8	36	22	0	8	35	25	13
15	0	8	38	23	0	8	37	25	14
16	0	8	40	23	0	8	39	25	15
17	0	8	42	24	0	8	41	26	16
18	0	8	44	25	0	8	43	26	17
19	0	8	46	25	0	8	45	27	18
20	0	8	48	26	0	8	47	27	19
21	0	8	50	26	0	8	49	27	20
22	0	8	52	27	0	8	51	28	21
23	0	8	54	27	0	8	53	28	22
24	0	8	56	28	0	8	55	28	23
25	0	8	58	28	0	8	57	29	24
26	0	9	0	29	0	8	59	29	25
27	0	9	2	29	0	9	1	29	26
28	0	9	4	30	0	9	3	30	27
29	0	9	6	30	0	9	5	30	28
30	0	9	8	31	0	9	7	30	29
31	0	9	10	31	0	9	9	30	30

OCTOBER.

Common Year.	Longitude ♄.				Anomaly ♄.				Biſſextile.
	S.	°	'	"	S.	°	'	"	
1	0	9	10	31	0	9	9	31	0
2	0	9	12	31	0	9	11	31	1
3	0	9	14	32	0	9	13	31	2
4	0	9	16	32	0	9	15	31	3
5	0	9	18	33	0	9	17	32	4
6	0	9	20	34	0	9	19	32	5
7	0	9	22	34	0	9	21	32	6
8	0	9	24	35	0	9	23	32	7
9	0	9	26	35	0	9	25	33	8
10	0	9	28	36	0	9	27	33	9
11	0	9	30	37	0	9	29	33	10
12	0	9	32	37	0	9	31	33	11
13	0	9	34	38	0	9	33	34	12
14	0	9	36	38	0	9	35	34	13
15	0	9	38	39	0	9	37	34	14
16	0	9	40	39	0	9	39	34	15
17	0	9	42	40	0	9	41	35	16
18	0	9	44	41	0	9	43	35	17
19	0	9	46	41	0	9	45	35	18
20	0	9	48	42	0	9	47	36	19
21	0	9	50	42	0	9	49	36	20
22	0	9	52	43	0	9	51	36	21
23	0	9	54	43	0	9	53	37	22
24	0	9	56	44	0	9	55	37	23
25	0	9	58	44	0	9	57	37	24
26	0	10	0	45	0	9	59	38	25
27	0	10	2	45	0	10	1	38	26
28	0	10	4	46	0	10	3	38	27
29	0	10	6	46	0	10	5	39	28
30	0	10	8	47	0	10	7	39	29
31	0	10	10	47	0	10	9	39	30

NOVEMBER.

Common Year.	Longitude ♄. S.	°	'	"	Anomaly ♄. S.	°	'	"	Biſſextile.
1	0	10	12	48	0	10	11	40	0
2	0	10	14	48	0	10	13	40	1
3	0	10	16	49	0	10	15	40	2
4	0	10	18	49	0	10	17	41	3
5	0	10	20	50	0	10	19	41	4
6	0	10	22	51	0	10	21	42	5
7	0	10	24	51	0	10	23	42	6
8	0	10	26	52	0	10	25	42	7
9	0	10	28	52	0	10	27	43	8
10	0	10	30	53	0	10	29	43	9
11	0	10	32	54	0	10	31	43	10
12	0	10	34	54	0	10	33	44	11
13	0	10	36	55	0	10	35	44	12
14	0	10	38	55	0	10	37	44	13
15	0	10	40	56	0	10	39	45	14
16	0	10	42	56	0	10	41	45	15
17	0	10	44	57	0	10	43	45	16
18	0	10	46	58	0	10	45	46	17
19	0	10	48	58	0	10	47	46	18
20	0	10	50	59	0	10	49	46	19
21	0	10	52	59	0	10	51	47	20
22	0	10	55	0	0	10	53	47	21
23	0	10	57	0	0	10	55	47	22
24	0	10	59	1	0	10	57	48	23
25	0	11	1	1	0	10	59	48	24
26	0	11	3	2	0	11	1	48	25
27	0	11	5	2	0	11	3	49	26
28	0	11	7	3	0	11	5	49	27
29	0	11	9	3	0	11	7	49	28
30	0	11	11	4	0	11	9	50	29
31	0	11	13	4	0	11	11	50	30

DECEMBER.

Common Year.	Longitude ♄.				Anomaly ♄.				Biſſextile.
	S.	°	'	"	S.	°	'	"	
1	0	11	13	5	0	11	11	50	0
2	0	11	15	5	0	11	13	50	1
3	0	11	17	6	0	11	15	51	2
4	0	11	19	6	0	11	17	51	3
5	0	11	21	7	0	11	19	51	4
6	0	11	23	8	0	11	21	52	5
7	0	11	25	8	0	11	23	52	6
8	0	11	27	9	0	11	25	52	7
9	0	11	29	9	0	11	27	53	8
10	0	11	31	10	0	11	29	53	9
11	0	11	33	10	0	11	31	53	10
12	0	11	35	11	0	11	33	54	11
13	0	11	37	11	0	11	35	54	12
14	0	11	39	12	0	11	37	54	13
15	0	11	41	13	0	11	39	55	14
16	0	11	43	13	0	11	41	55	15
17	0	11	45	14	0	11	43	55	16
18	0	11	47	15	0	11	45	56	17
19	0	11	49	15	0	11	47	56	18
20	0	11	51	16	0	11	49	57	19
21	0	11	53	16	0	11	51	57	20
22	0	11	55	17	0	11	53	58	21
23	0	11	57	17	0	11	55	58	22
24	0	11	59	18	0	11	57	59	23
25	0	12	1	18	0	11	59	59	24
26	0	12	3	19	0	12	2	0	25
27	0	12	5	19	0	12	4	0	26
28	0	12	7	20	0	12	6	0	27
29	0	12	9	20	0	12	8	0	28
30	0	12	11	21	0	12	10	1	29
31	0	12	13	21	0	12	12	1	30

H.	Long. ♄			Anom. ♄			H.	Long. ♄			Anom. ♄		
H.	°	'	''	°	'	''	H.	°	'	''	°	'	''
'	'	''	'''	'	''	'''	'	'	''	'''	'	''	'''
''	''	'''	''''	''	'''	''''	''	''	'''	''''	''	'''	''''
1	0	0	5	0	0	5	31	0	2	36	0	2	36
2	0	0	10	0	0	10	32	0	2	41	0	2	41
3	0	0	15	0	0	15	33	0	2	46	0	2	46
4	0	0	20	0	0	20	34	0	2	51	0	2	51
5	0	0	25	0	0	25	35	0	2	56	0	2	56
6	0	0	30	0	0	30	36	0	3	1	0	3	1
7	0	0	35	0	0	35	37	0	3	6	0	3	6
8	0	0	40	0	0	40	38	0	3	11	0	3	11
9	0	0	45	0	0	45	39	0	3	16	0	3	16
10	0	0	50	0	0	50	40	0	3	22	0	3	22
11	0	0	55	0	0	55	41	0	3	27	0	3	27
12	0	1	0	0	1	0	42	0	3	32	0	3	32
13	0	1	5	0	1	5	43	0	3	37	0	3	37
14	0	1	10	0	1	10	44	0	3	42	0	3	42
15	0	1	15	0	1	15	45	0	3	47	0	3	47
16	0	1	20	0	1	20	46	0	3	52	0	3	52
17	0	1	25	0	1	25	47	0	3	57	0	3	57
18	0	1	30	0	1	30	48	0	4	2	0	4	2
19	0	1	35	0	1	35	49	0	4	7	0	4	7
20	0	1	40	0	1	40	50	0	4	12	0	4	12
21	0	1	46	0	1	46	51	0	4	17	0	4	17
22	0	1	51	0	1	51	52	0	4	22	0	4	22
23	0	1	56	0	2	56	53	0	4	27	0	4	27
24	0	2	1	0	2	1	54	0	4	32	0	4	32
25	0	2	6	0	2	6	55	0	4	37	0	4	37
26	0	2	11	0	2	11	56	0	4	42	0	4	42
27	0	2	16	0	2	16	57	0	4	48	0	4	48
28	0	2	21	0	2	21	58	0	4	53	0	4	53
29	0	2	26	0	2	26	59	0	4	58	0	4	58
30	0	2	31	0	2	31	60	0	5	3	0	5	3

	Sign 0 ſubtract.				Sign 1 ſubtract.				
Mean Ano.	*Equation.*			*Logarithm* ♄ *a* ⊙.	*Equation.*			*Logarithm* ♄ *à* ⊙	*Mean Ano.*
	°	'	"		°	'	"		
0	0	0	0	6.003628	3	4	27	6.000791	30
1	0	6	23	6.003625	3	10	6	6.000601	29
2	0	12	46	6.003615	3	15	43	6.000406	28
3	0	19	9	6.003599	3	21	16	6.000205	27
4	0	25	31	6.003577	3	26	47	5.999998	26
5	0	31	53	6.003548	3	32	14	5.999786	25
6	0	38	15	6.003513	3	37	39	5.999568	24
7	0	44	36	6.003471	3	42	59	5.999344	23
8	0	50	56	6.003424	3	48	16	5.999114	22
9	0	57	16	6.003369	3	53	29	5.998878	21
10	1	3	34	6.003309	3	58	40	5.998637	20
11	1	9	52	6.003242	4	3	46	5.998390	19
12	1	16	9	6.003170	4	8	49	5.998138	18
13	1	22	25	6.003090	4	13	48	5.997882	17
14	1	28	39	6.003004	4	18	43	5.997620	16
15	1	34	52	6.002911	4	23	33	5.997350	15
16	1	41	4	6.002813	4	28	20	5.997080	14
17	1	47	14	6.002708	4	33	2	5.996800	13
18	1	53	23	6.002598	4	37	41	5.996517	12
19	1	59	13	6.002481	4	42	14	5.996229	11
20	2	7	35	6.002358	4	46	40	5.995935	10
21	2	11	38	6.002229	4	51	8	5.995637	9
22	2	17	40	6.002094	4	55	29	5.995334	8
23	2	23	39	6.001952	4	59	44	5.995026	7
24	2	29	36	6.001804	5	3	5	5.994713	6
25	2	35	31	6.001650	5	8	1	5.994396	5
26	2	41	23	6.001490	5	12	2	5.994074	4
27	2	47	13	6.001324	5	15	58	5.993747	3
28	2	53	0	6.001152	5	19	49	5.993416	2
29	2	58	45	6.000974	5	23	34	5.993081	1
30	3	4	27	6.000791	5	27	13	5.992741	0
	Sign 11 Add.				Sign 10 Add.				

Mean Ano.	Sign 2 ſubtract.				Sign 3 ſubtract.				Mean Ano.
	Equation.			Logar. ♄ à ☉.	*Equation.*			*Logarith.* ♄ *à* ☉	
	°	′	″		°	′	″		
0	5	27	13	5.992741	6	31	3	5.980957	30
1	5	30	49	5.992397	6	31	29	5.980528	29
2	5	34	19	5.992048	6	31	48	5.980098	28
3	5	37	43	5.991696	6	32	0	5.979667	27
4	5	41	2	5.991340	6	32	4	5.979234	26
5	5	44	15	5.990979	6	32	1	5.978801	25
6	5	47	22	5.990615	6	31	51	5.978368	24
7	5	50	23	5.990247	6	31	33	5.977934	23
8	5	53	19	5.989875	6	31	8	5.977499	22
9	5	56	9	5.989500	6	30	36	5.977064	21
10	5	58	53	5.989122	6	29	58	5.976629	20
11	6	1	31	5.988739	6	29	11	5.976194	19
12	6	4	2	5.988353	6	28	17	5.975760	18
13	6	6	27	5.987964	6	27	16	5.975326	17
14	6	8	47	5.987572	6	26	8	5.974892	16
15	6	11	0	5.987177	6	24	52	5.974459	15
16	6	13	6	5.986779	6	23	29	5.974026	14
17	6	15	7	5.986378	6	21	58	5.973596	13
18	6	17	1	5.985975	6	20	20	5.973163	12
19	6	18	48	5.985570	6	18	35	5.972734	11
20	6	20	28	5.985161	6	16	43	5.972306	10
21	6	22	2	5.984750	6	14	42	5.971879	9
22	6	23	30	5.984336	6	12	35	5.971454	8
23	6	24	51	5.983920	6	10	21	5.971031	7
24	6	26	5	5.983502	6	8	0	5.970609	6
25	6	27	12	5.983082	6	5	31	5.970189	5
26	6	28	12	5.982660	6	2	55	5.969772	4
27	6	29	5	5.982237	6	0	11	5.969357	3
28	6	29	52	5.981812	5	57	21	5.968945	2
29	6	30	31	5.981386	5	54	23	5.968535	1
30	6	31	3	5.980957	5	51	18	5.968128	0
	Sign 9 add.				Sign 8 add.				

Mean Ano.	Sign 4 ſubtract.				Sign 5 ſubtract.				*Mean Ano.*
	Equation			*Logarith.* ♄ *à* ☉	*Equation.*			*Logarithm* ♄ *à* ☉.	
	°	′	″		°	′	″		
0	5	51	18	5.968128	3	28	41	5.957965	30
1	5	48	6	5.967724	3	22	29	5.957718	29
2	5	44	47	5.967323	3	16	12	5.957478	28
3	5	41	22	5.966926	3	9	51	5.957245	27
4	5	37	50	5.966532	3	3	26	5.957020	26
5	5	34	10	5.966141	2	56	57	5.956803	25
6	5	30	22	5.965754	2	50	24	5.956593	24
7	5	26	30	5.965371	2	43	47	5.256391	23
8	5	22	30	5.964992	2	37	7	5.956197	22
9	5	18	23	5.964617	2	30	23	5.956010	21
10	5	14	10	5.964247	2	23	35	5.955832	20
11	5	9	50	5.963881	2	16	44	5.955662	19
12	5	5	24	5.963520	2	9	51	5.955500	18
13	5	0	51	5.963163	2	2	54	5.955347	17
14	4	56	12	5.962811	1	55	55	5.955202	16
15	4	51	26	5.962465	1	48	53	5.955065	15
16	4	46	35	5.962123	1	41	49	5.954937	14
17	4	41	38	5.961787	1	34	43	5.954817	13
18	4	36	35	5.961456	1	27	34	5.954706	12
19	4	31	26	5.961131	1	20	23	5.954604	11
20	4	26	10	5.960812	1	13	10	5.954510	10
21	4	20	49	5.960499	1	5	56	5.954425	9
22	4	15	22	5.960191	0	58	40	5.954349	8
23	4	9	49	5.959890	0	51	23	5.954282	7
24	4	4	11	5.959595	0	44	5	5.954224	6
25	3	58	29	5.959306	0	36	46	5.954174	5
26	3	52	42	5.959025	0	29	25	5.954134	4
27	3	46	49	5.958749	0	22	4	5.954103	3
28	3	40	51	5.958481	0	14	43	5.954080	2
29	3	34	48	5.958219	0	7	22	5.954067	1
30	3	28	41	5.957965	0	0	0	5.954062	0
	Sign 7 add.				Sign 6 add.				

A TABLE *of* Saturn's *Inclination, with the Reduction from his Orbit to the Ecliptic.*

Argument of Latitude. Reduction ſubtract.

	Si. 0 N Si. 6 S } *Aſc.* Inclination.			*Subtrac* *Reduct.*		*Si.* 1 N *Si.* 7 S } *Aſc* Inclination.			*Subtract.* *Reduct.*		
°	°	'	"	'	"	°	'	"	'	"	°
0	0	0	0	0	0	1	15	8	1	25	30
1	0	2	37	0	4	1	17	24	1	27	29
2	0	5	15	0	8	1	19	40	1	28	28
3	0	7	52	0	11	1	21	52	1	30	27
4	0	10	29	0	15	1	24	2	1	32	26
5	0	13	5	0	18	1	26	10	1	33	25
6	0	15	43	0	22	1	28	10	1	34	24
7	0	18	10	0	25	1	30	24	1	55	23
8	0	20	56	0	28	0	32	29	1	36	22
9	0	23	31	0	32	1	34	23	1	37	21
10	0	26	6	0	35	1	36	44	1	37	20
11	0	28	40	0	38	1	38	45	1	38	19
12	0	31	14	0	42	1	40	33	1	38	18
13	0	33	48	0	45	1	42	20	1	38	17
14	0	36	30	0	48	1	44	22	1	38	16
15	0	38	53	0	50	1	46	14	1	38	15
16	0	41	24	0	53	1	48	5	1	38	14
17	0	43	55	0	56	1	49	52	1	38	13
18	0	46	25	0	59	1	51	37	1	38	12
19	0	48	25	1	2	1	53	22	1	38	11
20	0	51	23	1	4	1	55	4	1	37	10
21	0	53	50	1	7	1	56	44	1	37	9
22	0	56	16	1	10	1	58	22	1	36	8
23	0	58	43	1	12	1	59	58	1	35	7
24	1	1	6	1	14	2	1	32	1	34	6
25	1	3	30	1	16	2	3	4	1	33	5
26	1	5	50	1	18	2	4	33	1	32	4
27	1	8	12	1	20	2	6	1	1	30	3
28	1	10	32	1	22	2	7	25	1	28	2
29	1	12	51	1	24	2	8	47	1	27	1
30	1	15	8	1	25	2	10	7	1	25	0
	Sign 11 S. *Sign* 5 N. } *Deſc.*			*Reduct.* *Add.*		*Sign* 10 S. *Sign* 4 N. } *Deſc.*			*Reduct.* *Add.*		

Argument Latitude. Reduction Add.

	Si. 2N } Aſc. Si. 8 S } Aſc. Inclination.			Subtrac. Reduct.		
	°	'	"	'	"	
0	2	10	7	1	25	30
1	2	11	24	1	24	29
2	2	12	40	1	22	28
3	2	13	53	1	20	27
4	2	15	2	1	18	26
5	2	16	9	1	16	25
6	2	17	14	1	14	24
7	2	18	17	1	12	23
8	2	19	18	1	10	22
9	2	20	15	1	7	21
10	2	21	10	1	4	20
11	2	22	3	0	2	19
12	2	22	53	0	59	18
13	2	23	40	0	56	17
14	2	24	24	0	53	16
15	2	25	16	0	50	15
16	2	25	45	0	48	14
17	2	26	21	0	45	13
18	2	26	55	0	42	12
19	2	27	27	0	38	11
20	2	27	56	0	35	10
21	2	28	22	0	30	9
22	2	28	45	0	28	8
23	2	29	6	0	25	7
24	2	29	23	0	22	6
25	2	29	36	0	18	5
26	2	29	50	0	15	4
27	2	30	0	0	11	3
28	2	30	7	0	8	2
29	2	30	9	0	4	1
30	2	30	10	0	0	0
	Sign 9 S } Deſc. Sign 3 N } Deſc. Argument of Latitude.			Reduct. Add. Reduction Add.		

A CATA-

A CATALOGUE of 777 Fixed Stars, rectified to the beginning of the Year 1727.

Names of the Stars in the Zodiack.

ARIES, the Ram 21.	Longit.				Latit.				Magnit.
	S.	°	′	″	°	′	″		
THE Southern in the former *Horn* called, *the Firſt*	♈	29	21	50	7	8	58	N	4
The Northern following in the ſame *Horn*	♉	0	8	0	8	29	0		4
The Bright Star in the top of the *Head*	♉	3	51	0	9	57	0		3
The Northern of the two in the *Jaw*	♉	4	19	0	7	23	0		6
The Star which is more towards the South	♉	5	5	0	5	42	30		6
That in the hinder part of the *Neck*	♈	29	42	0	5	24	0		5
In the *Reins*	♉	10	21	0	6	7	0		6
In the Eduction of the *Tail*	♉	14	42	0	4	8	30		5
The former of the three in the *Tail*	♉	17	0	0	1	46	30		4
The *Middle*	♉	18	12	0	2	50	0		5
The laſt	♉	19	35	30	2	36	0		6
In the *Thigh*	♉	13	7	0	1	12	0		6
In the *Ham*	♉	11	20	0	1	7	0		6
In the *Left-Knee*	♉	11	8	0	1	30	0		6
In the *Right-Knee*	♉	9	37	0	0	39	0	S	6
The little Star in the *Belly*	♉	10	31	0	4	1	0	N	6
Below the Bright Star in the *Head*	♉	3	26	0	9	13	0		6
The former upon the Back of the four without form	♉	12	20	0	10	50	30		5
The following from them that follow at the Baſe of the Weſt △	♉	13	8	0	11	16	0		4
The Eaſtern in the Baſe of the *Triangle*	♉	14	25	0	10	24	0		3
In the Crown of the ſaid *Triangle* towards the North	♉	14	36	0	12	25	30		4

TAURUS, the Bull 43.	Longit.				Latit.				*Magnit.*
	S.	°	'	"	°	'	"		
The higheſt in the Section.	♉	19	45	0	5	57	0	S	5
The following	♉	19	15	0	7	29	0		6
The third	♉	18	3	0	8	49	30		4
The fourth more South	♉	17	20	30	9	22	30		4
In the *right Shoulder*	♉	23	31	0	8	41	0		4
In the *Breaſt*	♉	26	46	0	8	3	0		4
In the *right Knee*	♉	29	44	0	12	13	30		4
In the *right Hough*	♉	26	4	0	14	30	30		4
In the *left Knee*	♊	5	54	0	9	32	0		5
In the *left Hough*	♊	4	56	0	11	48	0		5
In the Face: The firſt of *Suc.* in the Noſtrils	♊	1	57	0	5	46	0		3
Between this and the *North Eye*	♊	3	1	30	4	2	0		3
Between the ſame and the *South Eye*	♊	4	7	0	5	53	0		4
In the *South Eye*; *Aldebaran, Palilitium*	♊	5	57	50	5	29	50		1
In the *North Eye*	♊	4	38	0	2	36	30		3
At the Root of the *South Horn*	♊	9	57	0	3	40	0		6
The Southern of the ſecond in the ſame *Horn*	♊	13	58	0	2	30	0		6
That more towards the North	♊	12	49	0	1	49	0		4
In the Extremity thereof	♊	20	57	0	2	14	0		3
In the Beginning of the *North Horn*	♊	8	20	0	0	40	0	N	5
The Northward of the two in the *Ear*	♊	4	39	0	1	4	0		5
That Southward	♊	4	23	0	0	35	0		4
The former of the Two in the *Neck*	♉	29	35	0	1	12	0		5
That which followeth	♊	2	13	0	0	46	30	S	6
The Southern in the hinder part of the Neck	♊	1	49	0	5	16	0	N	6
In the common Extremity with the right Foot of *Henio* or *Auriga*	♊	18	44	46	5	21	34		2
The Northern of the ſame ſide	♊	1	34	30	7	55	30		5
The following Southern ſide	♊	4	19	0	3	57	0		5
The Northern of this ſide	♊	4	14	0	5	45	30		5
The Brighteſt Star of the three towards the Weſt among the *Pleiades*	♉	25	35	0	4	11	0		5
The loweſt towards the Weſtern of them	♉	25	48	0	4	2	0		6
The Middle and Brighteſt of them	♉	26	10	58	4	0	37		3

That

Names of the Stars in the Zodiack.	Longit.				Latit.				Magnit.
	S.	°	′	″	°	′	″		
That in the Point towards the Eaſt	♉	26	32	0	3	55	0	N	5
In the Hoof of the *left Foot*	♉	21	42	0	13	30	0	S	6
The little Star in the Ancle of the following *Foot*	♊	1	55	0	12	2	0		6
In the *right Shoulder*	♊	3	43	30	8	41	0		5
The former of the three below *Succula*	♊	4	27	0	6	56	30		5
The middlemoſt	♊	5	13	0	7	4	0		5
The following	♊	6	40	0	6	17	30		5
The little Star in the *South Horn*	♊	16	47	0	1	4	0		6
The following in the ſame *Horn*	♊	18	40	30	1	20	0		6
The little Star following the four in the *Section*	♉	19	18	0	9	34	30		6
To preceding of the two in the Quartile of the *Neck*	♊	1	7	30	6	33	0	N	5

GEMINI; The *Twins.* 30.	Longit.				Latit.				Magnit.
	S.	°	′	″	°	′	″		
In the higher Head, *Caſtor, Apollo*	♋	16	26	10	10	3	48	N	2
In the lower Head, *Pollux, Hercules*	♋	19	26	59	6	39	27		2
In the left hand of the *former Twin*	♋	7	7	0	10	58	0		5
In the *left Shoulder*	♋	11	39	0	7	43	0		4
In the *Shoulder-Blade* of the ſame	♋	15	9	0	5	42	0		4
In the *right Shoulder*	♋	17	32	0	5	10	0		5
In the *left Shoulder* of the following *Twin*	♋	19	51	0	3	3	0		4
In the *right ſide* of the former *Twin*	♋	15	3	0	2	56	0		6
The little Star in the left Elbow of the *higher Twin*	♋	15	55	0	6	0	0		6
In the Northern and Supream *Knee*	♋	6	7	0	2	11	30		3
In the left Knee of the following *Twin*	♋	11	11	0	2	6	30	S	3
In the Belly of the *Southern Twin*	♋	14	41	0	0	13	0		3
In the Ham of the *lower Twin*	♋	14	58	0	5	41	0		4
The firſt in the Foot of the former *Twin*	♊	29	43	0	0	58	0		4
The following Star in the ſame Foot, call'd *the Heel*	♋	1	29	0	0	53	0		3

Names of the Stars in the Zodiack.	Longit.				Latit.				Magnit.
	S.	°	′	″	°	′	″		
In the End of the right Foot of the former *Twin*	♋	2	59	0	0	8	0	S	4
The light Star of the Foot	♋	5	36	0	6	48	0		2
In the lower Foot of the following *Twin*	♋	7	14	0	10	9	0		4
In the Heel of the ſame Foot	♋	9	41	30	9	41	0		6
Above the Knee of the *lower Twin*	♋	8	8	0	1	12	0		6
In the Thigh of the *higher Twin*	♋	10	22	0	1	31	0	N	6
Beneath the Head, lower in the Head	♋	21	47	0	5	44	0		6
The little Star between both Heads	♋	18	49	0	7	24	0		5
About the Ear of the *higher Twin*	♋	15	14	0	9	42	0		5
The former at the tip of the Foot	♊	27	7	0	0	31	0	S	4
The loweſt of the five preceding between the *Twins*	♋	18	47	30	5	22	0		6
The following above the ſame	♋	19	51	0	3	48	30		6
The third	♋	21	15	30	2	42	0		6
The four	♋	14	13	0	0	57	30		6
The laſt	♋	25	39	0	1	18	30	N	6

CANCER. The *Crab-Fiſh*, 15.	Longit.				Latit.				Magnit.
	S.	°	′	″	°	′	″		
The Cloud in the Breaſt, called *Præſepe*	♌	3	31	30	1	14	0	N	Clad.
The Northern of them that precede in the Quartile of *Cancer*	♌	1	34	0	1	31	30		5
The more South	♌	1	54	30	0	47	30	S	5
The North *Aſellus* } *Ling* or *Whit.* {	♌	3	42	0	3	8	0	N	4
The South *Aſellus* }		4	53	0	0	4	0		4
In the South Arm	♌	9	48	30	5	8	0	S	3
In the North Arm	♌	2	29	0	10	23	0	N	5
In the Extremity of the North Foot	♋	25	41	0	1	15	30		5
In the Extremity of the South Foot	♋	26	49	0	7	5	0	S	5
The lighter in the Root of the Tail	♋	27	30	30	2	18	30		4

Names of the Stars in the Zodiack.	Long. S.	°	′	″	Lat. °	′	″		Magnit.
The next following in the Back	♋	29	57	30	1	4	0	S	6
The Northern of the three in the South Arm	♌	8	32	30	1	54	0		6
The Southern in the ſame Arm	♌	12	21	0	5	36	0		5
The Northern of the two in the Back	♌	7	12	0	7	14	0	N	6
The lower towards the South	♌	9	21	30	5	20	0		6

L E O, the *Lion*, 40.	Longit. S.	°	′	″	Latit. °	′	″		Magnit.
In the Noſtril	♌	11	26	30	10	23	0	N	4
In the opening of the Mouth	♌	13	1	20	7	52	0		4
The more Northern of the two in the Head	♌	17	36	0	12	21	0		4
The Southern	♌	16	50	0	9	40	0		3
The Northern of the three in the Neck	♌	23	42	30	11	50	0		3
The middle and brighteſt Star in the Neck	♌	25	44	0	8	47	0		2
That towards the South	♌	24	5	0	4	52	0		3
The *Heart*; *Regulus*, *Baſilica*	♌	26	2	10	0	26	38		1
The Southern in the Breaſt	♌	26	35	30	1	25	0	S	5
That going before next, *Regulus*	♌	23	28	30	0	0	0		4
That precedeth *this* in the right Knee	♌	19	39	30	0	16	0	N	5
In *Drace Dextra*	♌	17	52	0	3	10	0	S	4
The following Star in the other Foot	♌	20	25	0	3	47	0		4
In *Drace Siniſtra*	♌	25	31	0	3	55	0		4
In the left Arm-hole	♍	2	33	0	0	8	0	N	4
The firſt of the three in the Belly	♌	24	9	0	2	10	0		6
That more North of them that follow	♍	3	51	0	5	56	0		6
The more Southern	♍	5	50	0	2	49	0		6
The former of the two in the *Loyns*	♍	4	59	0	12	53	0		5
The light Star which follows	♍	7	26	0	14	20	0		2
The Northern and preceding of the two in the *Buttocks*	♍	9	35	0	9	41	30		3
The following and Southern Star	♍	10	53	0	7	50	30		6
In the *Thigh*	♍	13	43	30	6	7	0		3

In

Names of the Stars in the Zodiack.	Long.				Lat.				Magnit.
	S.	°	′	″	°	′	″		
In the latter Knee	♍	14	51	30	1	40	0	N	4
The middle Star in the Foot	♍	17	42	0	0	33	0	S	4
The lower Star in the hinder Foot	♍	21	12	0	3	2	30		4
In the End of the Tail, *Deneb.*	♍	17	50	4	12	16	50	N	1
The extream Star in the top of the left Foot	♌	18	17	0	4	4	0	S	6
In the the top of the other Foot preceding	♌	17	46	30	5	43	0		5
That almoſt in the Mid-body	♍	1	59	0	10	43	0		6
A little Star in the Head	♌	17	48	0	10	17	0	N	6
The firſt of the two in the left Foot	♌	17	38	30	7	39	0		4
That following	♍	20	35	0	5	41	0	N	5
The preceding of the two without Shape, on the Back	♌	28	7	30	17	40	0		5
That following	♍	1	42	0	16	30	0		5
That above the light Star in the Back	♍	6	39	30	16	47	0		5
Above the Tail of *Leo*, or rather in the right hand of *Virgo*	♍	15	7	0	17	19	0		4
The Northern of the three under the Belly	♍	10	43	0	1	20	30		4
The Middlemoſt	♍	10	15	0	0	9	30	S	5
The Southern of the three	♍	11	5	0	2	29	0		5

VIRGO; The *Virgin*. 39.

The Northern of thoſe in Quartile of the Head	♍	19	29	0	6	6	30	N	5
The Southern	♍	20	18	0	4	37	0		5
The Northern of the two following Stars in the *Vulture*	♍	23	52	0	8	33	30		5
The Southern	♍	23	43	0	6	10	0		5
In the End of the South and left Wing	♍	23	17	0	0	43	0		3
The former of the four in the South Wing	♎	1	1	0	1	25	0		4
The other following next	♎	6	20	0	2	50	0		3
The little Star the laſt but one	♎	11	13	0	2	23	30		6
The laſt	♎	14	22	0	1	45	0		4
The right ſide under the Girdle	♎	7	40	0	8	21	0		3

Names of the Stars in the Zodiack.	Longit.				Latit.				Magnit.
	S.	°	'	"	°	'	"		
The preceding of the three in the right and North Wing	♎	1	38	0	13	36	30	N	5
The Southern of the other two	♎	3	37	0	11	37	0		6
The more Northern, call'd *Vindemiatrix*	♎	6	8	30	16	12	54		3
In the Left-hand, *Spica*, *Ariſta*	♎	20	2	10	2	2	0	S	1
Under her Breech, in the right Buttock	♎	15	7	0	8	10	0	N	3
The Northernmoſt in the left-hand	♎	19	43	0	3	11	0		6
The more Northern of the two following	♎	22	54	0	1	45	30		6
The more Southern	♎	21	29	0	0	19	30	S	6
In the left Knee	♎	26	29	0	2	24	30	N	6
The Northern of the two in the higher Skirt	♎	29	34	0	11	2	0		5
The middle of the three in the Skirt	♎	29	54	0	7	18	30		4
The loweſt and Southern	♏	0	36	0	2	57	0		4
The more Southern of the two in the higher Skirt	♏	1	36	0	11	48	30		4
In the South Foot	♏	3	7	0	0	31	30		4
In the Northern and right Foot	♏	6	15	0	9	49	0		4
The lower of the two between *Vindemiatrix* and the *Girdle*	♎	3	6	0	10	26	0		6
The Star following the ſame in the right Buttock	♎	23	22	0	9	40	30		6
In the higher part of the Neck	♍	29	30	0	4	59	30		6
The little Star following *Vindemiatrix*	♎	10	10	0	16	14	0		6
The firſt of the three in the North Wing	♎	11	56	0	12	40	0		5
The middle of them	♎	16	11	0	12	34	30		6
The following Star	♎	23	56	0	13	7	0		5
That which is between the fourth and the fifth	♍	24	41	30	3	32	30		6
That without form under the left Arm	♎	8	23	0	3	25	30	S	5
The middle	♎	12	14	0	3	23	0		5
The following Star	♎	15	53	30	3	13	30		5
The former of the three under the ♍, *Spick*	♎	18	58	0	7	51	0		5
The middlemoſt towards the South	♎	21	20	0	9	16	0		5
The Star following, more Eaſt	♎	22	20	30	6	16	30		5

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LIBRA; The *Ballance*, 18.	Longit.				Latit.				Magnit.
	S	°	′	″	°	′	″		
The Star above the South Ballance	♏	10	27	0	1	55	0	N	5
The South Ballance	♏	11	16	0	0	26	0		2
That above the North Ballance towards the Weſt	♏	11	45	30	8	18	30		4
The firſt from the South Ballance towards the Eaſt	♏	14	11	30	1	24	0		5
The North Ballance	♏	15	33	30	8	31	45		2
In the left Arm under the North Ballance	♏	16	53	0	7	37	0	S	3
The Star following it	♏	17	12	0	1	48	0		3
The Star below the North Ballance to the Eaſt	♏	17	31	0	8	7	0	N	4
The ſecond from the ſaid Ballance to the Eaſt	♏	18	4	0	2	58	30		6
That below the ſame towards the Weſt	♏	21	12	0	2	21	0		4
The third from the ſame Ballance	♏	21	18	0	4	28	0		3
The Star below this towards the Eaſt	♏	23	33	30	4	4	0		4
The higher of the two Stars below the South Ballance	♏	25	56	0	0	2	30		4
After this, the preceding three in in a right line	♏	26	1	0	3	33	0		4
The middle Star	♏	26	33	0	6	10	0		4
The lower of the South Ballance	♏	26	48	30	0	7	0		4
The higher and more Eaſtern above the South Ballance	♏	27	26	0	9	19	0		4
That which follows	♏	29	4	0	10	57	0		4

SCORPIO; The *Scorpion*. 10.	Longit.				Latit.				Magnit.
	S.	°	′	″	°	′	″		
The middle in the Forehead	♏	28	44	0	1	54	30	S	3
The Southern of the three lighter Stars in the Forehead	♏	29	10	0	5	22	30		3
The higheſt in the Forehead	♏	29	21	0	1	5	0	N	3
That more towards the South in the Foot	♏	29	28	30	8	27	30	S	4
The little Star in the △ with the light Star of the Forehead	♏	29	52	0	0	14	0	N	5
The Northernmoſt Star of the Forehead	♐	0	48	30	1	42	0		4
Among the preceding lower Feet	♐	2	31	30	6	37	30	S	5
That preceding the *Heart* towards the North	♐	3	56	0	3	55	0		4
The glittering Star in the middle, the *Heart*, *Antares*	♐	5	56	54	4	31	26		1
The Star following the Heart towards the South	♐	7	38	0	5	50	0		4

SAGITTARIUS; The *Archer*. 14.	Longit.				Latit.				Magnit.
	S.	°	′	″	°	′	″		
The Star more North in the North part of the *Bow*	♐	29	26	0	2	27	30	N	4
The more South of the two in the North part of the *Bow*	♑	2	32	30	2	0	0	S	4
The Star going before in the *Dart* or *Arrow*	♑	6	25	0	3	50	0		5
In the left Shoulder	♑	8	36	0	3	31	0		4
The firſt of the three in the *Head*	♑	9	41	30	1	24	30	N	4
The middle	♑	11	13	0	0	59	0		4
The laſt	♑	12	28	0	1	31	0		4
The firſt in the *Hood* or *Mantle*	♑	14	29	0	3	6	30		6
The middle Star in the *Hood*	♑	15	39	30	4	17	0		4
The following and higher	♑	15	56	0	6	9	30		5
The obſcure Star in the right Elbow	♑	18	11	0	3	8	0	S	6
The more Weſtern of the Triangle in the *Hood*	♑	20	53	30	5	8	0	N	6
The lowermoſt of the ſame Triangle in the *Hood*	♑	21	9	0	1	25	0		6
The Eaſtern, and laſt in the Triangle or *Hood*	♑	24	37	30	5	12	0		6

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CAPRICORNUS ; The *He-Goat* 28.	Long. S.	°	′	″	Lat. °	′	″		*Magnit.*
The Cloudy Star above the *Weſtern Horn*	♑	28	53	0	7	16	0	N	6
The Cloudy Star in the front of the Triangle	♑	28	58	0	0	24	0		*Cl.*
The Northern of the three in the former *Horn*	♒	0	3	0	7	2	30		3
The Southern of the three in the former *Horn*	♒	0	16	0	4	41	30		3
The Middlemoſt of the three in the ſame *Horn*	♒	0	36	0	6	53	0		6
The Star in the Baſe of the Triangle in the Front	♒	0	42	0	0	48	0		*Cl.*
The higheſt in the ſame Triangle	♒	1	22	0	1	20	0		6
The Eaſtern in the Triangle	♒	1	26	0	0	28	0		*Cl.*
The Star preceding in the *right Knee*	♒	3	32	0	6	58	0	S	6
The Southern Star in the *Neck*	♒	3	51	0	0	15	0	N	6
The following Star in the *left Knee*	♒	4	13	0	9	2	0	S	6
The Northern of the two in the *Neck*	♒	4	34	0	3	25	0	N	6
In the left Arm	♒	7	58	0	8	8	0	S	6
The Northern of the three in the *Mid-belly*	♒	9	3	0	3	1	0		5
The loweſt of the three in the *Belly*	♒	9	16	0	4	27	0		6
The firſt of the two Stars in the *Back*	♒	10	6	0	0	29	0		5
The Eaſtern of the three in the middle of the *Belly*	♒	11	8	0	4	25	0		6
The loweſt in the *Belly*	♒	12	9	30	6	56	0		5
The Northern following Star of the two under the *Paunch*	♒	13	45	0	6	29	0		6
The following Star of them in the *Back*	♒	13	52	0	1	16	30		5
The preceding of the two towards the *Flank*	♒	16	10	0	4	48	0		4
That following	♒	17	51	0	4	49	0		5
The firſt of the two bright Stars in the *Tail*	♒	17	59	0	2	26	0		3
That ſucceeding	♒	19	45	0	2	29	0		3
The former in the *higher Tail*	♒	19	59	0	2	22	0	N	5
The Northern in the End of the *Tail*	♒	21	39	0	4	17	0		6
The Star going before this towards the North	♒	22	1	0	0	10	0	S	6
The more Southern of the reſt in the *higher Tail*	♒	22	12	0	0	14	30		5

AQUA-

AQUARIUS; The *Water-bearer* 41.	Longit.				Latit.				Magnit.
	S.	°	′	″	°	′	″		
The brighteſt Star going before the *left Hand*	♒	7	57	0	8	10	0	N	4
The Middlemoſt of the three in the *left Hand*	♒	9	13	30	8	19	0		5
In the *left Shoulder*	♒	19	34	0	8	42	0		3
In the *Back* under the Arm-hole	♒	20	23	0	6	0	0		5
The following and lower of the three in the *left Hand*	♒	20	36	0	4	50	0		5
In the *Head*	♒	24	11	30	15	23	0		6
The Star at the *Buttocks*	♒	24	58	0	2	0	0	S	4
The Star below the *right Shoulder*	♒	28	21	0	9	11	0	N	5
The more Southern of the two in the *left Knee*	♒	28	40	30	10	48	0	S	5
The former of the two in the *right Hand*	♒	29	30	0	2	46	0	N	
The brighteſt Star in the *right Shoulder*	♒	29	34	30	10	42	0		3
The following of the two in the *right Hand*	♓	0	16	0	2	29	0		6
In the *left Hip*	♓	1	25	0	5	40	0	S	6
The Northern of the two in the *left Knee*	♓	1	35	0	9	57	0		6
In the *right Thigh*	♓	1	38	0	1	10	0		5
In the *right Elbow*	♓	2	55	0	8	17	0	N	3
The more North, in the *right Hand*	♓	4	49	30	10	31	0		5
The Northern or Star at the *right Knee*	♓	4	50	0	5	46	0	S	5
The loweſt of the three in the laſt bending of the Water	♓	5	2	0	15	53	0		5
The Southern Star in the *right Shank*	♓	5	7	0	8	10	0		3
That more South in the *right Hand*	♓	5	8	0	8	52	0	N	4
In the pouring out of the Water	♓	5	37	0	4	8	0	S	4
The middlemoſt of the three in the laſt bending of the Water	♓	5	47	0	15	40	0		5
The higher of the three in the laſt bending of the Water	♓	6	10	0	14	25	0		5
The Star following in the *right Hand*	♓	6	38	0	8	10	0	N	4
The South of the pouring of the Water	♓	7	49	0	0	19	0	S	4

Names of the Stars in the Zodiack.	Longit.				Latit.				[illegible]
	S.	°	'	"	°	'	"		
The Northern of the three Stars in the third bending of the Water	♓	9	39	30	14	47	0	S	5
The Middlemoſt of the ſame three	♓	10	6	0	15	30	0		5
The following Star in the firſt bending of the Water	♓	10	45	0	1	24	0		6
The Southern of the three in the third bending of the Water	♓	11	35	0	16	31	0		5
The Northern of the two in the firſt bending of the Water	♓	12	28	0	3	58	0		5
The following South Star in the firſt bending of the Water	♓	12	56	0	4	10	0		5
Near this, declining towards the South	♓	12	59	30	4	44	0		5
In the South bending of the Water	♓	13	18	0	2	49	0		5
The Star which is next the firſt bending of the Water	♓	13	23	0	1	0	0		5
The Northern of the three in the third bending of the Water	♓	14	48	0	14	29	0		5
The Middle Star in the third bending of the Water	♓	15	31	0	15	16	0		6
The firſt of the two near together in the firſt bending	♓	15	52	0	10	59	0		5
The following of them	♓	16	23	0	11	33	0		5
The following ✱ of the three in the third bending of the Water	♓	16	39	0	16	23	0		6
The laſt in the Effuſion, *Fomahaunt*	♒	29	59	50	21	4	54		1

PIS-

PISCES; *Fiſhes* 36.	Longit.				Latit.				Magnit.
	S.	°	′	″	°	′	″		
In the Mouth of the South Fiſh	♓	14	47	0	9	4	0	N	5
The Southern of the two in hinder part of the *Head*	♓	17	35	30	7	17	30		4
That which goes before in the *Paunch*	♓	19	6	0	4	23	0		5
The Northern in the hinder part of the *Head*	♓	19	15	30	8	54	0		6
The former of the two in the *Back*	♓	21	27	0	9	3	0		5
That which follows in the *Paunch*	♓	22	50	0	3	35	0		5
The following Star in the *Back*	♓	23	41	30	7	13	0		5
In the *Tail*	♓	28	47	0	6	23	6		5
Above this, towards the Eaſt,	♈	0	12	0	7	27	0		6
The following Star	♈	4	14	0	5	28	0		6
The Northern of the two in the *Belly*	♈	5	3	0	17	26	0		5
That following the North Star in the *Belly* to the North	♈	5	56	0	18	31	0		6
The preceding of the three lighter in the South Line	♈	10	21	0	2	11	0		4
The Middlemoſt of them	♈	13	43	0	1	5	0	N	4
The Northern going before of the ſecond Star in the bending of the *Net*	♈	14	10	0	1	31	0	S	6
The following of them towards the South	♈	15	31	0	4	19	0		6
The following of the three in the South Line	♈	16	4	0	0	57	0	N	4
The Middle and Foremoſt Star of the *Triangle*	♈	18	48	30	20	24	0		6
The former of the three after the bending	♈	19	18	0	3	3	0	S	5
The preceding of the three, in the *Throat* near the *Elbow* of *Andromeda*	♈	19	41	0	13	21	0	N	5
The Middlemoſt of them	♈	19	47	30	20	21	0		6
The Southern of the *Triangle*	♈	19	51	30	19	24	0		6
The loweſt of the three, near the Elbow of *Andromeda*	♈	19	54	0	11	21	0		6
That following the middle of the three, in the South	♈	20	45	0	12	27	0		5
The Southern of the two, in the *Mouth* of the *N. Fiſh*	♈	24	34	30	20	43	0		5
The Northern in the *Head* of the *Knot*	♈	23	1	30	5	21	0		4

The

Names of the Stars in the Zodiack.	Longit.				Latit.				Magnit.
	S.	°	'	"	°	'	"		
The Northern of the three in the *Net*	♈	23	21	30	9	24	0	N	5
That more towards the South of the *Belly*	♈	22	43	0	15	30	0		5
The following and laſt in the bending of the *Nets*	♈	23	42	30	7	56	0	S	5
The former in the N. Line from the *Knot*	♈	23	57	0	1	38	0	N	5
The Northern of the two in the *Mouth* of the *N. Fiſh*	♈	25	0	0	22	0	0		6
The brighter in the joyning together of the *Nets*	♈	25	32	0	9	4	0	S	3
In the hinder part of the *Head* of the *N. Fiſh*	♈	23	26	0	23	3	0	N	6

In the Northern Hemiſphere.

1 CYNOSURA; or the *Leſſer Bear.*	Long.				Lat.				Magnit.
	S.	°	'	"	°	'	"		
In the End of the Tail, call'd the *Pole Star*	♊	24	45	31	66	4	11	N	2
The laſt Star in the Tail but one	♊	27	21	0	69	50	0		4
The Star in the Root of the Tail	♋	5	9	0	73	56	0		4
The higher of the two in the Quartile of them that follow	♋	23	14	0	75	0	0		4
The higher of the two in the Quartile of them that precede	♌	9	1	30	72	51	0		3
The lower of the ſame	♌	16	26	0	73	23	0		3

2 HELICE ; The *Greater Bear* 13.	Longit.				Latit.				Magnit.
	S.	°	′	″	°	′	″		
Under the *left Eye*	♋	18	55	0	43	55	0	N	4
That in the *Snout*	♋	19	21	30	40	2	0		4
The Northern of the two in the *right Foot*	♋	27	41	0	29	15	0		3
In the *left Knee* going before	♌	2	17	30	34	34	0		3
The higher of them which go before in the greater Quartile	♌	11	19	0	49	40	0		2
The lower of the ſame ſquare	♌	15	35	30	45	6	16		2
The lower of them in the higher ſquare	♌	26	30	0	47	6	0		2
The higher of thoſe following the ſquare	♌	27	10	30	51	37	0		2
The laſt but two of the *Tail, Alioth*	♍	4	55	0	54	18	0		2
The laſt but one of the *Tail*	♍	11	41	30	56	22	0		2
The laſt of the *Tail, Benenacz*	♍	22	57	0	54	25	0		2
That without ſhape between this and the *Lion*	♍	19	28	0	40	6	0		2
That without form beween the *Bear* and the *Lion*'s Head	♌	8	2	0	17	55	0		3

3 DRACO ; The *Dragon*. 12.	Longit.				Latit.				Magnit.
	S.	°	′	″	°	′	″		
That in the *Tongue*	♏	20	41	30	76	17	0	N	4
In the *Mouth*	♐	5	59	30	78	15	0		4
The former of the two bright Stars in the *Head*	♐	8	4	0	75	21	30		3
The following of them	♐	24	6	25	74	58	30		2
The Northern of the ſecond Flexure of the □	♈	14	11	0	82	49	0		3
The Southern of the ſame ſide	♈	29	32	0	79	25	0		3
The following Star towards the South of the Triangle	♉	21	25	0	80	25	0		4
That in the Flexure of the third *Joynt* or *Knot*	♍	1	29	0	81	4	0		3

The

In the Northern Hemiſphere.	Long.				Latit.				Magnit.
	S.	°	′	″	°	′	″		
The neareſt to the Pole of the Zodiack	♌	8	11	0	86	53	30	N	4
The 3*d* in the *Tail*, (Pole at the Creation)	♍	3	55	30	66	36	0		2
The laſt Star ſave one in the *Tail*	♌	12	11	6	61	33	0		3
The laſt Star of the *Tail*	♌	6	22	30	57	7	0		3

4. CEPHEUS. 6.	Longit.				Latit.				Magnit.
	S.	°	′	″	°	′	″		
The clear Star in the *right Shoulder*	♈	8	58	0	68	54	0	N	3
That in the *Hood*, towards the North	♈	10	14	0	61	3	0		4
That towards the Eaſt	♈	15	24	0	58	46	0		4
In the *Girdle*	♉	1	58	0	71	7	0		3
In the *left Foot*	♉	26	6	0	64	28	0		3
The Southern of the two in the *Bending of the Arm*	♈	1	6	0	71	49	0		4
5 BOOTES, *Arctophylax* 14.									
The former of the three in the *left Hand*	♍	23	54	30	58	53	0	N	4
The ſecond	♍	27	18	0	58	51	0		4
The third	♍	28	44	30	60	5	0		4
In the *left Elbow*	♎	3	3	0	54	40	0		4
In the *left Shoulder*	♎	14	50	30	49	33	30		3
In the *Head*	♎	20	28	30	54	15	30		3
In the *right Shoulder* above the *Crown*	♎	29	14	30	41	1	0		3
Below the *right Arm* in the *Hip*	♎	24	14	0	40	40	0		3
That in the *right Leg*	♎	29	11	30	27	57	0		3
The higheſt in the *left Leg*	♎	15	27	0	28	9	0		3
In the Skirt of his Garment, *Arcturus*	♎	20	24	40	30	57	0		1
The middlemoſt above the *right Knee*	♎	27	58	30	30	27	30		4
The former of the four in the *right Hand*	♎	29	56	0	40	14	0		5
The Star following the Northern, in the *right Hand*	♏	1	1	0	41	55	0		6

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6. CORONA BOREALIS; The *North Crown*, 8.	Longit.				Latit.				Magnit.
	S.	°	′	″	°	′	″		
The Brighteſt Star of the Crown	♏	8	23	30	44	23	0	N	2
That going before	♏	5	22	0	46	8	0		4
The Star above this	♏	4	55	30	48	25	0		5
That which follows to the North	♏	9	47	0	50	21	0		6
That following the Bright Star	♏	10	59	34	44	33	0		4
The next following	♏	13	10	0	44	52	0		4
The next which doth accompany it	♏	15	17	0	46	9	30		4
The laſt of all	♏	14	47	0	48	24	0		6

7. HERCULES. *Engonaſis*, *Ingeniculum*, or a Man kneeling down, 17.	Longit.				Latit.				Magnit.
	S.	°	′	″	°	′	″		
The Star in the middle of his *Body*	♎	28	51	0	57	15	0	N	4
In the *right Leg*, above the *Ancle*	♏	4	13	30	50	15	30		4
In the higher Calf of the *Leg*,	♏	7	42	0	63	51	0		4
In the *right Knee*	♏	10	28	0	65	55	0		4
In the higher *right Thigh*	♏	24	53	30	60	22	0		3
The loweſt in the *right Arm*	♏	21	51	30	37	19	0		4
The laſt but one of the *right Arm*	♏	25	21	0	40	5	30		3
In the *right Shoulder*	♏	27	12	30	42	48	0		3
In the *left Hip*	♏	27	47	0	53	10	30		3
The more Oriental in the *left Thigh*	♐	4	30	30	53	21	0		3
In the *left Shoulder*	♐	10	55	0	47	47	0		3
In the *Head*, *Ras Algiethi*	♐	12	16	0	37	23	0		3
In the *left Arm*	♐	16	7	0	49	23	0		4
The former in the *Shin* of the *Lion*	♐	21	21	0	51	16	30		4
That in the *Calf* of the *left Leg*	♐	16	2	0	69	22	0		3
In the *left Knee*	♐	24	41	0	60	47	30		3
In the Baſe of the Triangle towards the North	♐	25	42	0	53	46	0		4

8. LYRA, The *Harp*, 7.	Long.				Lat.			Magnit.
	S.	°	′	″	°	′	″	
The bright Star of the *Harp*	♑	11	28	8	61	45	30 N	1
The Northern of the two preceding the *Yoke*	♑	13	1	30	56	5	0	3
That under the bright Star towards the Eaſt	♑	13	11	0	60	26	0	5
That above the bright Star towards the North	♑	14	59	0	61	27	0	5
The North of the two following in the *Yoke*	♑	17	56	0	55	6	0	3
The little Star under it	♑	18	5	0	54	31	30	5
That almoſt in the *Mid-Body*	♑	22	37	0	58	6	0	6

9. CYGNUS; The *Swan*, 12.	Longit.				Latit.			Magnit.
	S.	°	′	″	°	′	″	
In the upper Beak, or Bill, *Albireo*	♑	27	29	0	49	2	0 N	3
In the middle of the *Neck*	♒	9	18	0	54	19	0	4
In the *Breaſt*	♒	21	10	30	57	9	30	3
In the *Tail*	♓	1	32	30	59	56	30	2
The brighteſt in the *higher Wing*	♒	12	38	0	64	28	0	3
In the bending of the *lower Wing*	♒	23	53	40	49	26	20	3
The extream Star of the *lower Wing*	♒	29	28	0	43	44	0	3
The former Star in the *lower Foot*	♓	2	17	0	54	59	0	4
The higher of the two in the *higher Foot*	♒	26	19	0	64	17	0	4
The little Star in the middle of the *upper Wing*	♓	0	26	0	69	35	0	6
The New Star of the Year 1600, in the *Breaſt*	♒	18	0	0	55	30	0	2
Below the Wing towards the *Foot*, *Pegaſus*,	♓	6	18	0	38	39	0	4

10. CASSIOPEIA, 16.	Longit.				Latit.			Magnit.
	S.	°	'	"	°	'	"	
In the Middle of the *Foot-ſtool*	♈	24	8	0	54	27	0 N	6
That which is by the extream Star of the *Chair*	♈	27	17	0	52	39	0	6
The extream Star of the *Chair*	♈	27	19	0	51	8	0	6
The bright Star of the *Chair*	♉	1	20	30	51	14	0	3
In the *Head*	♉	1	20	0	44	40	0	4
In the *Breaſt, Schedir*	♉	4	1	11	46	35	54	2
In the *Girdle*	♉	6	23	30	47	5	0	4
In the bowing towards the *Hips*	♉	10	12	30	48	46	0	3
At the *Knee*	♉	14	6	0	46	22	0	3
In the *Leg*	♉	20	58	30	47	29	0	3
In the *left Arm*	♉	7	59	30	43	6	30	4
In the *left Elbow*	♉	7	1	0	43	28	0	5
The *Navel-Ring*	♉	8	37	0	47	31	0	6
The End of the *Foot-ſtool*	♉	24	6	0	56	13	0	6
In the *Foot-ſtool* next the Plant of the Foot	♉	23	43	0	52	8	0	6
The extream Star of the *Foot*	♉	28	24	0	48	54	0	4

11. PERSEUS, 20.	Longit.				Latit.			Magnit.
	S.	°	'	"	°	'	"	
In the utmoſt folding of the *right Hand*	♉	20	16	0	39	0	30 N	6
In the *left Shoulder*	♉	20	49	30	31	34	30	4
The ✱ towards the North in the *Head*	♉	20	5	0	21	35	0	4
That going before the ✱ under *Algol*	♉	21	3	0	20	33	0	4
That under *Algol*	♉	22	16	0	20	54	0	5
The Head of *Meduſa, Algol*	♉	22	21	30	22	23	47	2
That in the *left Elbow*	♉	23	51	0	26	4	0	4
In the *right Elbow*	♉	24	54	30	37	28	0	4
In the *right Shoulder*	♉	26	31	0	34	30	0	3
In the *Crown* of the *Head*	♉	23	35	0	34	36	0	5
In the *Back*	♉	25	18	0	30	36	0	4
In the *right Side*	♉	28	2	0	30	5	50	2
Near the bowing of the ſame Side	♊	1	0	0	27	14	0	3
In the *left Knee*	♊	1	53	0	19	4	0	3

In the Northern Hemiſphere.	Long.				Latit.				Magnit.
	S.	°	′	″	°	′	″		
In the *left Thigh*	♉	29	56	0	22	6	0	N	4
In the *left Leg*	♊	1	8	30	14	53	30		5
The middle Star in the *right Knee*	♊	6	59	0	26	39	0		4
In the *left Heel*	♉	27	18	0	12	8	0		4
That following the *left Foot*	♉	29	21	0	11	17	0		4
That without form above the *Head*	♉	28	30	0	42	26	0		3

12, ERICHTHONIUS, *Auriga*, 15.	Longit.				Latit.				Magnit.
	S.	°	′	″	°	′	″		
The former of the two in the Skirt of *Auriga*	♊	11	49	30	14	51	0	N	5
The Southern following	♊	12	16	0	14	2	0		5
In the *higher Foot*	♊	12	49	30	10	22	0		4
That below the *Kids*, about the *Buttocks*	♊	13	45	0	51	3	0		5
The former *Kid*	♊	14	50	0	18	8	30		4
In the *left Elbow*	♊	14	54	0	20	52	0		4
The latter *Kid*	♊	15	34	0	11	18	30		4
The Star below the *Loyns* towards the Weſt	♊	16	43	0	15	21	30		5
In the left Shin-bone	♊	18	24	30	11	15	0		5
The Southern Star in the *Loyns*	♊	17	51	0	16	29	0		5
In the *left Shoulder*, the *Goat*, *Capella*	♊	18	2	30	22	51	47		1
The former of the two in the *Head*	♊	25	23	0	32	15	0		6
The lower, and following Star	♊	25	59	0	30	50	0		4
In the *right Shoulder*	♊	27	37	0	11	27	30		2
In the *right Arm*	♊	26	13	0	13	44	0		4

13. OPHIUCHUS; or, the *Serpent-bearer*, 24.	Longit.				Latit.				Magnit.
	S.	°	′	″	°	′	″		
In the *Head*, *Ras Alhagu*	♐	18	35	0	35	57	0	N	3
In the *right Shoulder*	♐	21	30	0	28	1	0		3
The lower and ſame Star in the ſame *Shoulder*	♐	22	50	0	26	11	0		3
The former in the *left Shoulder*	♐	6	44	30	32	55	30		4
The ✱ following in the *left Shoulder*	♐	8	1	0	31	56	0		4
In the *left Elbow*	♐	1	48	0	23	39	30		4
The more Northern in the *left Hand*	♏	28	29	0	17	19	0		3
The following Star more South	♏	29	42	0	16	30	0		3
In the *right Hip*	♐	21	18	0	15	19	0		4
The former and more Southern in the *right Hand*	♐	25	58	0	13	47	0		4
That more Northern in the ſame *Hand*	♐	26	58	30	15	20	0		5
In the *right Knee*	♐	14	9	0	7	18	0		3
In the *left Knee*	♐	5	24	0	11	30	0		3
In the *right Shin*	♐	16	8	0	2	12	0		3
The fifth of them without form in the *Milky Way*	♐	28	16	0	33	2	0		4
That above the bright Star in the *Neck* of the *Serpent*	♏	18	33	0	8	4	0		4
Behind the *Hip* of *Ophiuchus*	♐	16	34	0	10	21	0		4
The Southern of the two that follow	♐	20	42	0	26	36	30		3
The Northern	♐	21	33	0	10	35	0		4
The Star above this	♐	20	30	0	15	18	0		4
That between the *left Hand* and the *Knee*	♐	2	42	0	13	19	0		5
That which touches the top *left Foot*	♐	19	21	0	0	58	0		5
In the *right Leg*	♐	18	35	0	7	10	0		5
The Southern Star following the *Hip*	♐	20	47	0	8	5	0		4

14. The *Serpent* of OPHIUCHUS, 13.

	Long.				Lat.				Magnit.
	S.	°	′	″	°	′	″		
The former in the *Mouth*	♏	13	20	0	38	12	0	N	5
That in the *Mouth*	♏	14	9	0	39	6	30		3
In the *Temples*	♏	18	51	0	35	25	0		3
In the Eduction of the *Neck*	♏	16	6	0	34	27	30		3
Near the *left Eye*	♏	16	55	0	37	28	0		4
That towards the *Noſtrils*	♏	18	17	0	42	37	0		4
The ſecond in the *Neck*	♏	14	31	30	28	58	0		3
In the middle of the *Neck*	♏	18	15	0	25	35	0		2
The Southern of the three	♏	20	31	0	24	5	0		3
In the ſecond Flexion	♏	22	11	30	16	26	0		4
The laſt of the Tail but two	♐	26	14	0	19	57	0		3
The laſt but one	♑	1	57	0	20	37	0		3
The laſt	♑	11	55	0	26	59	0		3

15. The *Arrow*, or *Dart*; SAGITTA, 8.

	Long.				Lat.				Magnit.
	S.	°	′	″	°	′	″		
The higher and more Eaſtern	♒	3	17	0	39	13	0	N	4
The middle Star going before this	♑	29	40	0	38	58	30		5
The ſmall Star above the laſt	♒	0	16	0	36	31	0		6
The higher of the two	♑	27	15	30	38	53	0		4
The lower of the ſame	♑	27	24	0	38	16	0		4
The lower without form above the *Arrow*	♒	1	58	0	42	43	0		4
The higher of them	♒	3	21	0	44	2	0		4
The third of the informed in Oxy*gonio* △	♑	25	42	0	46	3	0		4

16. The *Eagle*, or *flying Vulture*; AQUILA, 12.

	Long.				Lat.				Magnit.
	S.	°	′	″	°	′	″		
The middlemoſt of thoſe above the *Tail*	♑	10	57	0	43	32	0	N	4
The ſeventh without form, which follows of the three	♑	11	2	0	41	5	0		4
That next before the *Tail*	♑	14	29	0	37	40	0		3
The *Tail* of the *Vulture*	♑	15	59	44	36	13	48		
The higher Star in the *lower Wing*	♑	23	1	30	28	46	00		4
The lower Star that follows in the *lower Wing*	♑	23	59	0	26	35	0		5

In the Northern Hemiſphere.	Longit.				Latit.				Magnit.
	S.	°	′	″	°	′	″		
The little Star above the *bright Star*	♑	27	18	0	30	54	0	N	6
In the *left Shoulder*	♑	27	11	0	31	18	0		3
The brighteſt near the *Back*	♑	27	54	54	29	19	11		1
In the *Neck*	♑	28	38	0	26	49	30		3
In the *Head*	♒	1	13	30	27	8	30		6
17. ANTINOUS, with his *Bow*, 7.									
That without form going before the *right Foot*	♑	12	41	0	16	57	0	N	4
In the *right Foot*	♑	13	31	0	17	41	0		3
In the *right Arm*	♑	19	46	0	24	56	0		3
In the *Knee*	♑	21	2	0	14	28	0		3
In the *right Side*	♑	22	2	30	20	14	30		3
In the *Breaſt*	♑	26	35	0	21	38	0		3
In the *left Hand*	♒	1	6	30	18	48	0		3
18. DELPHINUS; The *Dolphin*, 10.									
The brighteſt Star of the *Tail*	♒	10	17	0	29	8	0	N	3
The former and loweſt of the two in the *Rhombus*	♒	11	3	0	30	41	0		6
That below the *Tail*	♒	11	27	0	27	34	0		6
That which follows the *Tail*	♒	11	33	0	28	52	30		6
That which goes before in the *Head*	♒	12	2	0	32	8	30		5
The Star following the *Rhombus*	♒	12	27	0	31	41	0		6
The more Southern Star of the former ſide in the *Rhombus*	♒	12	41	0	31	57	30		3
The more Northern in the ſame ſide	♒	13	35	30	35	5	0		3
The more Southern of the following ſide	♒	15	21	30	32	0	0		3
In the *Head*	♒	15	37	0	32	47	0		3
19. EQUICULUS, The *little Horſe-Colt*, 4.									
The former Star of the *Head*	♒	19	17	0	20	12	0	N	4
The former Star of the *Mouth*	♒	19	39	0	25	16	0		4
The following Star	♒	20	39	30	24	52	0		4
The following Star of the *Head*	♒	21	39	30	21	6	0		4

20. EQUUS, ALATUS, PEGASUS, 20.

	Longit.				Latit.				Magnit.
	S.	°	'	"	°	'	"		
Between the Mouth and the Foot	♒	26	36	0	33	21	0	N	4
In the Mouth	♒	28	7	0	22	7	30		3
The upper between the Mouth and the Foot	♓	0	32	0	36	11	0		4
In the *Head* of *Pegaſus*	♓	3	0	30	16	25	0		4
In the *Leg*	♓	5	8	0	36	42	30		4
The End of the *Wing*, *Algenib.*	♈	5	23	0	12	35	0		2
In the *Neck*	♓	8	13	0	20	51	0		4
In the *left Knee*	♓	10	35	0	34	19	0		4
The bright Star of the *Neck*	♓	12	24	30	17	41	0		3
The following Star of the *Neck*	♓	14	10	0	18	29	0		5
The higher going before in the *Mane*	♓	14	29	0	15	43	0		6
The lower and following in the Mane	♓	14	45	0	14	30	0		6
In the right Leg	♓	15	48	0	41	8	30		4
Following the firſt between the Mouth and Foot	♓	17	0	0	23	16	0		4
Former of the two in the Breaſt	♓	19	14	30	28	49	0		4
Firſt Star of the Wing, *Marchab*	♓	19	41	30	19	26	0		2
That following the former of the two in the Breaſt	♓	20	38	30	29	24	30		4
In the right Knee towards the South	♓	21	10	0	34	24	0		5
In the right Knee	♓	21	55	0	35	7	30		3
In the ſtretching forth of the Thigh, *Scheat*	♓	25	34	0	31	7	0		2

21. ANDROMEDA, 23.

	S.	°	'	"	°	'	"		Magnit.
That in the extream Ring of the Chain	♓	25	45	0	57	19	0	N	4
In her Head	♈	10	29	43	25	41	1		2
The more Southern in the higher Hand	♈	12	13	0	40	56	0		4
The more Northern	♈	13	31	0	41	44	0		4
The higheſt of all in the North Hand	♈	14	32	0	43	49	0		4
The more Southern of the three in the right Arm	♈	16	43	0	31	33	0		5
The lower in the left Shoulder	♈	27	10	0	23	3	30		4
The higher of the two in the left Arm	♈	16	54	0	17	48	0		4

In the Northern Hemiſphere.	Longit.				Latit.				Magnit.
	S.	°	′	″	°	′	″		
The middlemoſt in the *right Arm*	♈	17	52	0	32	14	30	N	5
The Northern in the *right Arm*	♈	17	30	30	33	20	30		4
The leaſt Star in the *higher Hand*	♈	16	8	0	24	8	0		5
In the *left Elbow*	♈	18	38	30	15	58	0		5
The loweſt in the *right Shoulder*	♈	18	51	30	27	6	30		5
The Northern in the *Girdle*	♈	25	31	0	32	30	30		4
The Middlemoſt in the *Girdle*	♈	25	51	0	30	33	30		4
The Southermoſt in the *Girdle, Mirach*	♈	26	34	0	25	56	19		2
The brighteſt Star above in the *left Shoulder*	♈	18	4	30	24	20	0		3
In the *right Knee*	♉	2	41	0	36	20	0		5
The lower in the *left Calf*	♉	5	8	0	27	54	30		5
The higher in the *left Calf*	♉	7	1	0	28	59	0		5
The brighteſt Star preceding in the *right Foot*	♉	8	37	0	35	21	30		4
The brighteſt Star in the *South Foot*	♉	10	34	0	27	46	30		2
The extream Star in the *higher Foot*	♉	10	51	30	36	49	0		5

22. *The* TRIANGLE, 4.

In the Top of the *Triangle*	♉	3	4	0	16	49	30	N	4
In the *Baſe* towards the North	♉	8	34	30	20	33	0		4
The more Southern in the *Baſe*	♉	9	43	0	81	57	0		4
The Middlemoſt	♉	9	44	0	19	29	0		5

23. COMA BERENICES, 14.	Longit.				Latit.			Magnit.
	S.	°	′	″	°	′	″	
The firſt towards the South	♍	19	45	0	23	30	0 N	4
The Cuſp of the firſt and North Triangle	♍	20	2	0	28	25	0	3
The former of the two Southern Stars near together	♍	20	10	0	25	51	0	4
The higher touching the Triangle towards the South	♍	20	27	0	27	23	0	5
The lower of them	♍	20	31	0	27	20	0	4
The other towards the Eaſt	♍	20	33	0	26	7	0	4
That which follows the *North Triangle*	♍	21	4	0	27	7	0	4
That going before thoſe three which ſeem to touch	♍	22	36	0	24	56	0	4
The higheſt of the three that ſeem to touch	♍	22	55	0	25	16	0	4
The loweſt and following Star	♍	24	37	0	24	0	30	4
That in the *Cuſpis* between the Extenſion of the *Hair*	♍	29	2	0	30	16	0	4
That preceding the End of the *Hair*	♍	29	34	0	31	42	0	4
That towards the South of the little *Triangle*	♎	0	0	0	28	32	0	4
The laſt in the Extenſion of the *Hair*	♎	0	43	0	32	46	0	4

New Conſtellations in the Northern Hemiſphere.

24. MUSCA; the *Fly* 4.	Long.				Latit.			Magnit.
	S.	°	′	″	°	′	″	
In the *lower Wing*	♉	14	40	0	20	12	0 N	3
In the *upper Wing*	♉	14	40	0	12	12	0	4
In the *Neck*	♉	13	50	0	11	0	0	4
In the *Head*	♉	12	0	0	10	40	0	5

25. CAMELAPARDALUS, 2.	Longit.				Latit.				Magnit.
	S.	°	′	″	°	′	″		
In his *left Foot*	♊	15	6	0	31	0	0	N	4
In his *left Ear*	♋	14	10	0	76	30	0		5
26. LYNX 7, all *5th* and *6th* Magnitude.									
In the *Neck*	♋	7	0	0	38	0	0	N	5
27 *Leo Minor* 17, in ♌									
28 *Aſterion* 7, in ♍									
29 Mount *Mænalus* 6 in ♏									
30 *Vulpecula*, the young *Fox* 14 ♒									
31 *Anſer*, the *Gooſe* or *Gander*, 5 in ♒									
32 *Scutum*, 6 in ♑									
33 *Licerta Stella*, 8 Stars, in ♓									
34 *Cor Caroli*	♍	21	20	0	40	15	0	N	2

Southern Images.

Leviathan

1. BALENUS, or CETUS, the *Whale*, 20.	Longit.				Latit.				Magnit.
	S.	°	′	″	°	′	″		
THE North Star of the *Tail*	♓	27	8	0	10	1	0	S	3
The Southern, or bright Star of the *Tail*	♓	28	41	0	20	47	0		2
The more Weſtern of them	♈	7	56	30	16	55	0		3
The Eaſtern of the two bright Stars in the *Back*	♈	12	27	30	15	46	0		3
In the *Mid-Belly*	♈	14	10	0	25	1	0		4
The loweſt in the *Belly*	♈	15	35	0	31	4	0		4
That goes before the North Star of the *Belly* to the South	♈	16	49	30	21	55	0		5
The Northern Star of the *Belly*	♈	18	10	0	20	19	0		3
The former Star North in the Breaſt of □	♈	25	54	0	25	17	0		4
The former of the two lower Stars towards the South	♈	26	17	30	28	31	0		4

Southern Images.	Long.				Lat.				Magnit.
	S.	°	′	″	°	′	″		
The Northern preceding	♈	29	32	30	25	58	0	S	3
The Southern of the following Star in the *Breaſt*	♈	29	56	30	28	16	30		4
In the hinder part of the *Head*	♉	0	14	30	4	19	0		4
That in the right Line with the 385 of the *Goat*	♉	4	34	30	9	12	0		4
That below the *Eye*	♉	3	39	0	5	52	0		4
The former of the three near the *Eye-lid*	♉ ♉	3	47	0	14	32	0		3
The Middlemoſt in the *Mouth*		5	38	30	12	2	30		3
The brighteſt Star in the *Jaw, Mandibula*	♉	10	32	0	12	37	0		2
The Star in the *Snout*	♉	11	16	0	7	50	0		3
That above the *Eye*	♉	7	52	0	5	36	0		4

2. ORION, 34.

The ſixth in the *Buckler*	♊	8	8	0	15	27	0	S	4
The ſeventh in the ſame	♊	8	18	0	16	50	0		4
The fifth Star in the *Buckler*	♊	8	34	0	13	3	30		4
The eighth Star in the *Buckler*	♊	8	43	0	20	2	0		4
The ninth in the *Buckler*	♊	9	42	0	20	55	0		4
The fourth in the *Buckler*	♊	9	45	0	12	25	30		4
The third in the *Buckler*	♊	9	55	0	11	6	0		6
The ſecond in the *Buckler*	♊	10	33	0	9	7	0		4
The moſt Northern of the nine in the *Buckler*	♊	9	38	0	8	17	0		5
The Southern Star in the left hand	♊	12	45	0	14	24	0		6
The Middlemoſt	♊	13	18	30	13	8	0		6
The bright Star in the *left Foot, Rigel*	♊	13	0	50	31	10	11		1
That in the *left Heel*	♊	14	0	30	22	53	0		4
The former under the *Arm* and *Buckler*	♊	13	43	0	20	8	0		4
The higher of the three in the *left Hand*	♊	15	21	30	11	45	0		6
The former of the two above the *Belt*	♊	16	30	0	24	6	0		6
That on the *Back*	♊	16	19	30	19	40	0		5

Southern Images.	Longit.				Latit.				Magnit.
	S.	°	'	"	°	'	"		
The firſt of the two above the *Belt*	♊	15	44	0	23	32	0	S	5
Above the Belt on the *right Side*	♊	16	42	0	21	23	0		5
That in the Calf of the *left Leg*	♊	15	47	0	31	0	0		5
The former of the two below the *Sword*	♊	18	5	0	30	37	30		4
That in the Hilt of the *Sword*	♊	16	22	30	25	36	0		3
The middle Star of the *Sword*	♊	19	9	0	28	45	0		3
Orion, The firſt Star in the *Belt*	♊	18	32	28	23	36	7		2
The middlemoſt	♊	19	39	0	24	33	30		2
The laſt	♊	20	51	30	21	21	30		2
In the *right Arm*	♊	26	49	30	14	51	0		4
In the *left Shoulder*	♊	17	8	0	16	53	0		2
That in the *Head* towards the Weſt	♊	19	56	30	13	54	0		5
The higheſt in the *Head.*	♊	19	56	30	13	26	0		4
The *right Shoulder*	♊	24	55	50	16	4	30		2
In the *right Knee*	♊	22	34	0	33	8	0		3
The Southern Star in the *Sword*	♊	19	12	0	29	17	0		2
The firſt of the ten without form above *Orion*	♋	0	29	0	29	31	0		4
3. ERIDANUS ; The River PO, 19.									
The firſt of thoſe that touch the *Whale*	♉	4	55	0	24	34	0	S	3
Between this and the third	♉	7	21	0	23	58	30		4
The third which follows	♉	10	1	0	25	59	0		3
That which goes foremoſt of the four	♉	14	30	0	24	34	0		3
The third Star going before	♉	16	52	30	27	47	0		3
The next behind this	♉	17	7	0	28	46	30		4
The former of the two under the *Bull*	♉	18	10	0	18	26	0		4
The next Star in the *River*	♉	20	3	0	33	13	0		3
The following Star South	♉	21	52	0	22	45	0		4
The next Star in the *River*	♉	25	34	0	30	25	0		5
The next above the ſame	♉	25	38	0	27	32	0		4
The following Star	♉	26	43	0	28	9	30		4
The next higher Star	♉	29	31	0	25	3	0		5
The next following	♊	2	59	30	25	11	30		4

Southern Images.	Longit.				Latit.				Magnit.
	S.	°	'	"	°	'	"		
The next higher Star	♊	5	30	30	25	34	0	S	4
The next Star	♊	7	14	30	27	51	0		4
The next following	♊	9	24	0	29	52	0		5
The next Star	♊	11	35	0	31	35	30		4
In the River near the Foot of *Orion*	♊	11	37	0	27	54	30		3
4. LEPUS; The *Hare*, 13.									
The Extream Star of the *fore Foot*	♊	8	10	30	45	0	0	S	4
That in the *Head*	♊	11	34	0	39	4	0		5
The higher Star in the former *Ear*	♊	11	59	30	34	34	0		5
The lower Star in the ſame *Ear*	♊	12	5	30	35	54	0		4
The lower Star in the other *Ear*	♊	13	59	0	36	14	0		5
The higher Star in the ſame *Ear*	♊	14	12	0	35	18	0		6
In the left *fore Foot*	♊	15	51	30	43	57	0		3
That in the Back or *Mid-Body*	♊	17	34	30	41	5	30		3
The more Southern of the two in the *Hind-Foot*	♊	21	6	30	45	49	30		3
The former in the *Back*	♊	22	11	0	38	16	0		4
The more Northern of them in the *Hinder Foot*	♊	23	21	0	44	18	0		3
The hindermoſt in the *Back*	♊	25	12	30	37	40	30		3
The laſt in the *Scutt*	♊	28	7	0	38	26	0		4

5. CA-

5. CANIS MAJOR; The *Great Dog*, 13.	Longit.				Latit.				Magnit.
	S.	°	'	"	°	'	"		
The lower Star of the firſt in the *right Foot* behind	♋	2	52	0	51	46	30	S	3
That in the end of the right fore Foot	♋	3	27	0	41	18	30		2
In the right Shoulder of the *Great Dog*	♋	8	17	30	42	12	0		5
That in the Mouth, called *Sirius*	♋	10	19	50	39	32	8		1
In the middle of the *fore Head*	♋	13	12	0	36	43	0		5
In the *Neck*	♋	13	48	0	39	30	0		4
In the middle of the *Breaſt*	♋	14	21	30	46	39	30		5
That under the *left Ear*	♋	15	51	0	38	2	30		3
In the Belly, *viz.* in the Flank	♋	17	6	30	51	24	30		3
That in the *Back*	♋	17	15	30	46	9	30		5
That in the *Belly*	♋	19	40	0	48	30	0		3
That in the *Head* near the *right Ear*	♋	20	46	30	34	50	0		4
That in the *Tail*	♋	25	56	30	51	24	30		3

6. CANIS MINOR, The *Leſſer Dog*, 5.	Long.				Lat.				Magnit.
	S.	°	'	"	°	'	"		
In the *Neck*	♋	18	24	30	13	33	30	S	3
That out of form above the *Neck*	♋	18	27	30	9	46	0		6
Above the bright Star of the *Neck*	♋	18	34	0	12	51	0		6
In the *Thigh*, by the *Greeks* call'd *Procyon*	♋	22	1	10	15	57	55		1
That following towards the Tail of *Cancer*	♋	22	42	30	10	19	30		5

7. **ARGO**; The *Ship*, 11.	Longit. S.	°	′	″	Latit. °	′	″	Magnit.
The former Star of the *Buckler*	♋	29	45	0	47	28	0 S	3
The higheſt Star of the *Ship*	♌	2	20	30	44	58	30	3
In the *Sail*	♌	5	51	30	32	7	0	4
That out of form towards the South	♌	6	12	0	38	31	0	4
That in the Top of the *Stern*	♌	7	38	30	43	18	0	3
The higheſt Star in the *Maſt*	♌	11	46	30	24	29	30	4
The loweſt of the three in the *Maſt*	♌	14	11	30	32	56	0	6
The Star next above	♌	14	36	30	30	18	0	4
The former of the two in the *Sail-Yards*	♍	1	11	0	21	39	30	4
That following	♍	6	5	30	22	29	30	3
That out of form between the *Sail* and *Galaxia*	♍	25	29	0	30	30	0	3
8. **HYDRA**; or the *Water-Serpent*, 24.								
That out of form before the *Head*	♌	0	29	0	10	19	0 S	3
The former Star in the *Head*	♌	7	24	30	14	37	0	5
Above the firſt towards the North	♌	8	31	0	14	16	30	4
The more Northern in the hinder part of the *Head*	♌	8	33	0	11	8	0	4
The next in the *Head*	♌	9	7	30	11	36	0	5
The next Star in the *Head*	♌	10	45	30	11	1	0	6
The next Star in the *Neck*	♌	13	36	30	11	5	30	4
The next	♌	16	26	30	13	5	0	5
The Southern in the *Joynt*	♌	21	38	30	16	46	0	5
The middle Star in the *Neck*	♌	21	56	0	15	0	0	4
The brigteſt Star, or *Cor Hydræ*	♌	23	30	30	22	24	0	1
The Northern of the three in the bending of the *Neck*	♌	23	49	0	14	17	30	4
The following next the *Heart*	♌	28	57	0	26	23	30	4
The next following Star	♍	1	54	0	26	12	0	5
The former of the two that touches above this	♍	4	33	30	23	13	0	5

Southern Images.	Long.				Lat.				Magnit.
	S.	°	'	"	°	'	"		
The fourth Star after the *Heart*, *Hydra*	♍	5	38	0	21	51	0	S	4
The next following	♍	11	16	0	24	38	0		4
That in a right line following	♍	14	26	0	23	31	0		5
The former next the *Water-Pot*	♍	16	36	0	21	48	30		4
Under the baſe of the *Water-Pot*	♍	24	46	30	25	36	0		4
The Southern	♍	25	34	0	30	17	0		5
The little Star going before the *Tail*	♎	21	9	0	14	37	0		6
The Star under the *Tail*	♎	23	9	0	13	43	0		5
That out of form next before the *Head*	♌	6	30	30	12	27	0		4
9. CRATERA, or the *Water-Pot*, 8.									
That in the Baſe in the *Water-Pot*	♍	19	58	0	22	41	0	S	4
The former of the two above the *Pot*	♍	22	12	0	13	10	0		4
The former of the two in the middle of the *Pot*	♍	22	55	30	17	25	0		4
The following of the two above the *Pot*	♍	24	47	0	11	17	0		4
The following of the two in the *middle Pot*	♍	25	28	0	19	39	0		4
In the middle of the *Water-Pot*	♍	26	40	0	14	9	0		5
The former of the two lower Stars above the *Pot*	♎	0	15	0	18	10	0		4
That following after	♎	2	18	0	16	2	0		4

10. CORVUS, the *Raven*, or *Crow*, 7.

	Longit. S.	°	′	″	Latit. °	′	″		Magnit.
The former of the two higher in the □	♎	6	58	0	14	25	0	S	3
That Star near the *Eye*	♎	7	53	0	19	39	0		4
The following Star in the ſquare	♎	9	40	0	12	7	0		3
In the *Bill*	♎	8	23	0	21	46	0		4
In the *Neck*	♎	9	59	0	18	14	0		5
In the left Wing above the bright Star	♎	10	6	30	11	28	0		5
The following of the lower Star in the Square	♎	13	34	0	17	59	0		3

11. CENTAURUS, 4.

	Longit. S.	°	′	″	Latit. °	′	″		Magnit.
The former of the two immediate Stars	♏	1	57	0	20	51	0	S	5
That more towards the North	♏	2	44	0	19	8	0		5
The former Star in the *Head*	♏	2	48	0	20	12	0		5
The moſt Southern of the four in the *Head*	♏	3	12	0	21	49	0		5

Note, Becauſe no more of this, (nor the other Southern Conſtellations) are ſeen to us, is the reaſon I break off here. See Dr. *Halley*'s Catalogue of the Southern Stars.

12. The CROSIERS, are under the *Centaur* 4.

	Longit. S.	°	′	″	Latit. °	′	″		Magnit.
The preceding of two middlemoſt in the *Croſs*	♍	1	57	30	50	18	0	S	3
The Southern Foot of the *Croſs*	♍	8	8	30	52	45	0		2
The Northern of the four	♍	2	58	30	47	41	0		2
The following Star	♍	7	54	30	48	29	0		2

13	*Grus*, or the *Crane*, contains Stars	13
14	*Phœnix*	15
15	*Toucan*, or the *American Gooſe*	18
16	*Indus*, or the *Indian*	12
17	*Pavo*, or the *Peacock*	16
18	*Apous*, *Avis Indica*	12
19	*Robur Caroli*	5
20	*Apis*, *Muſca*, or *Muia*	4
21	*Triangulum Auſtralis*	5
22	*Chameleon*	9
23	*Piſces Volans*	7
24	*Dorado*, or *Xiphas*, the *Golden-Fiſh*, or *Sword-Fiſh*	6
25	*Ara*, the *Altar*	8
26	*Hydrus*	15
27	*Columba Noachi*, the Dove of *Noah*	4

* * *

A TABLE *of the Mean Conjunction of the first Satellite of* Jupiter.

Years Carrent	Mean Conjun. D.	h.	′	″	*Num.* A	*Num.* B
1700	1	15	13	18	271	985
1701	0	5	24	45	355	904
1702	1	14	4	48	439	819
1703	1	4	16	15	523	734
1704	0	18	27	44	608	650
1705	1	3	7	45	692	569
1706	0	17	19	13	776	484
1707	0	7	30	40	860	400
1708	1	16	10	46	945	315
1709	0	6	22	14	29	234
1710	1	15	2	16	114	149
1711	1	5	13	44	198	64
1712	0	19	25	12	282	980
1713	1	4	5	13	366	899
1714	0	18	16	40	450	814
1715	0	8	28	9	534	729
1716	1	17	8	14	619	645
1717	0	7	19	41	703	564
1718	1	15	59	45	787	480
1719	1	6	11	13	872	396
1720	0	20	22	40	956	310
1721	1	5	2	44	40	229
1722	0	19	14	11	125	143
1723	0	9	25	38	209	57
1724	1	18	5	42	293	975
1725	0	8	17	10	377	889
1726	1	16	57	13	462	808
1727	1	7	8	41	546	722
1728	0	21	20	8	630	636
1729	1	6	0	12	715	554
1730	0	20	11	39	799	468
1731	0	10	23	7	883	382
1732	0	0	34	34	967	296
1733	0	9	14	38	52	215
1734	1	17	54	41	136	133
1735	1	8	6	9	220	47

A Table of the Mean Conjunction of the

Years Current.	Mean Conjun. D.	h.	′	″	*Num,* A	*Num.* B
1736	0	22	17	36	305	961
1737	1	6	57	40	389	880
1738	0	21	9	7	473	794
1739	0	11	20	35	557	708
1740	0	1	32	2	642	622
1741	0	10	12	6	726	540
1742	0	0	23	33	810	454
1743	1	9	3	37	895	373
1744	0	23	15	4	979	287
1745	1	7	55	8	63	205
1746	0	22	6	35	148	119
1747	0	12	18	3	232	33
1748	0	2	29	30	316	947
1749	0	11	9	34	400	866
1750	0	1	21	1	485	780
1751	1	10	1	5	569	698
1752	1	0	12	33	653	612
1753	1	8	52	37	738	531
1754	0	23	4	4	822	445
1755	0	13	15	32	906	359
1756	0	3	27	0	990	273
1757	0	12	7	3	75	191
1758	0	2	18	30	159	106
1759	1	10	58	34	243	24
1760	1	1	10	1	328	938
1761	1	9	50	35	412	856
1762	1	0	1	2	496	770
1763	0	14	13	0	580	684
1764	0	4	24	27	665	598
1765	0	13	4	31	749	517
1766	0	3	15	58	833	431
1767	1	11	56	2	918	349
1768	1	2	7	29	2	263
1769	1	10	47	33	86	182
1770	1	0	59	0	171	96
1771	0	15	10	28	255	10

Years Current.	Mean Conjun. D.	h.	'	"	*Num.* A	*Num.* B
1772	0	5	21	56	339	924
1773	0	14	2	0	423	842
1774	0	4	13	27	508	767
1775	1	12	53	31	592	675
1776	1	3	4	58	676	589
1777	1	11	45	1	761	507
1778	1	1	56	28	845	421
1779	0	16	7	56	929	335
1780	0	6	19	23	13	249
1781	0	14	59	27	98	187
1782	0	5	10	54	182	81
1783	1	13	50	57	266	995
1784	1	4	2	25	350	910
1785	1	12	42	29	434	838
1786	1	2	53	54	518	752
1787	0	17	5	21	603	677
1788	0	7	16	50	687	591
1789	0	15	56	55	771	509
1790	0	6	8	23	855	423
1791	1	14	48	27	940	337
1792	1	4	59	54	24	251
1793	1	13	39	57	108	170
1794	1	3	51	24	192	84
1795	0	18	2	52	276	999
1796	0	8	14	20	360	913
1797	0	16	54	23	444	832
1798	0	7	5	51	528	756
1799	1	15	45	54	614	670
1800	1	5	57	21	698	585
1801	1	14	37	25	782	504
1802	1	4	48	53	867	418
1803	0	19	0	20	951	332
1804	0	9	11	48	35	247
1805	0	17	51	51	119	166
1806	0	8	3	19	204	80
1807	1	16	43	23	288	995
1808	1	6	54	49	372	909

January.				Number	Number
D.	h.	'	"	A	B
1	18	28	36	0	5
3	12	57	12	1	9
5	7	25	48	1	14
7	1	54	24	2	18
8	20	23	0	2	23
10	14	51	36	2	27
12	9	20	12	3	32
14	3	48	48	3	37
15	22	17	24	4	14
17	16	46	0	4	46
19	11	14	36	4	51
21	5	43	12	5	55
23	0	11	47	5	60
24	18	40	23	6	64
26	13	8	59	6	69
28	7	37	35	7	73
30	2	6	11	7	78
31	20	34	47	7	82
February.					
0	20	34	47	7	82
2	15	3	23	8	87
4	9	31	59	8	92
6	4	0	35	9	96
7	22	29	11	9	101
9	16	57	47	9	105
11	11	26	23	10	110
13	5	54	59	10	114
15	0	23	35	11	118
16	18	52	11	11	123
18	13	20	47	11	128
20	7	49	23	12	132
22	2	17	59	12	137
23	20	46	35	13	141
25	15	15	11	13	146
27	9	43	47	13	150

March				Number	Number
D.	h.	'	"	A	B
1	4	12	23	14	155
2	22	40	59	14	159
4	17	9	35	15	164
6	11	38	10	15	168
8	6	6	46	16	173
10	0	35	22	16	177
11	19	3	58	16	182
13	13	32	34	17	186
15	8	1	10	17	190
17	2	29	46	18	195
18	20	58	22	18	199
20	15	26	58	18	204
22	9	55	34	19	208
24	4	24	10	19	213
25	22	52	46	20	217
27	17	21	22	20	221
29	11	49	58	20	225
31	6	18	34	21	230
April					
0	6	8	34	21	230
2	0	47	10	21	235
3	19	15	46	22	239
5	13	44	22	22	244
7	8	12	58	22	248
9	2	41	34	23	252
10	21	10	10	23	257
12	15	38	46	24	261
14	10	7	22	24	265
16	4	35	58	25	270
17	23	4	33	25	274
19	17	33	9	25	279
21	12	1	45	26	283
23	6	30	21	26	287
25	0	58	57	27	292
26	19	27	33	27	296

April.				Number	Number
D.	h.	'	"	A	B
28	13	56	9	27	300
30	8	24	45	28	304
May.					
0	8	24	45	28	304
2	2	53	21	28	309
3	21	21	57	29	313
5	15	50	33	29	317
7	10	19	9	29	322
9	4	47	45	30	326
10	23	16	21	30	330
12	17	44	57	31	335
14	12	13	33	31	339
16	6	42	9	31	343
18	1	10	45	32	348
19	19	39	21	32	352
21	14	7	57	33	356
23	8	36	33	33	361
25	3	5	9	33	365
26	21	33	45	34	369
28	16	2	21	34	373
30	10	30	57	35	378
June.					
0	10	30	57	35	378
1	4	59	32	35	382
2	23	28	8	36	386
4	17	56	44	36	391
6	12	25	20	36	395
8	6	53	56	37	399
10	1	22	32	37	403
11	19	51	8	38	408
13	14	19	44	38	412
15	8	48	20	38	416
17	3	16	56	39	420

June				Number	Number
D.	h.	′	″	A	B
18	21	45	32	39	425
20	16	14	8	40	429
22	10	42	44	40	433
24	5	11	20	40	438
25	23	39	56	41	442
27	18	8	32	41	446
29	12	37	8	42	450
July.					
1	7	5	54	42	455
3	1	34	20	42	459
4	20	2	56	43	463
6	14	31	32	43	468
8	9	0	8	44	472
10	3	28	44	44	476
11	21	57	20	45	480
13	16	25	55	45	485
15	10	54	31	45	489
17	5	23	7	46	493
18	23	51	43	46	498
20	18	20	19	47	502
22	12	48	55	47	506
24	7	17	31	47	510
26	1	46	7	48	515
27	20	14	43	48	519
29	14	43	19	48	523
31	9	11	55	49	528
Auguſt					
0	9	11	55	49	528
2	3	40	31	49	532
3	22	9	7	50	536
5	16	37	43	50	541
7	11	6	19	50	545
9	5	34	55	51	549

Auguſt				Number	Number
D.	H.	'	"	A	B
11	0	3	31	51	554
12	18	32	7	52	558
14	13	0	43	52	562
16	7	29	19	53	567
18	1	57	55	53	571
19	20	26	31	54	575
21	14	55	7	54	580
23	6	23	43	54	584
25	3	52	18	55	588
26	22	20	54	55	593
28	16	49	30	56	597
30	11	18	6	56	602
September					
1	5	46	42	56	606
3	0	15	18	57	610
4	18	43	54	57	615
6	13	12	30	58	619
8	7	41	6	58	624
10	2	9	42	58	628
11	20	38	18	59	632
13	15	6	54	59	637
15	9	35	30	60	641
17	4	4	5	60	646
18	22	32	42	60	650
20	17	1	18	61	655
22	11	29	54	61	659
24	5	58	30	62	663
26	0	27	6	62	668
27	18	55	42	62	672
29	13	24	18	63	677

October				Number	Number
D.	H.	′	″	A	B
1	7	52	54	63	681
3	2	21	30	64	686
4	20	50	6	64	690
6	15	18	41	65	695
8	9	47	17	65	699
10	4	15	53	65	704
11	22	44	29	66	708
13	17	13	5	66	713
15	11	41	41	67	717
17	6	10	17	67	721
19	0	38	53	67	721
20	19	7	29	68	736
22	13	36	5	68	735
24	8	4	41	69	739
26	2	33	17	69	744
27	21	1	53	69	749
29	15	30	29	70	753
31	9	59	5	70	758
November					
0	9	59	5	70	758
2	4	27	41	71	762
3	22	56	17	71	767
5	17	24	53	71	772
7	11	53	29	72	776
9	8	22	5	72	781
11	0	50	41	73	785
12	19	19	17	73	790
14	13	47	47	74	794
16	8	16	29	74	799
18	2	45	5	74	804
19	21	13	40	75	808
21	15	42	16	75	813
23	10	10	52	76	817
25	4	39	28	76	822
26	23	8	4	76	827
28	17	36	40	77	831
30	12	5	16	77	836

December				Number	Number
D.	H.	′	″	A	B
0	12	5	16	77	836
2	6	33	52	78	840
4	1	2	28	78	845
5	19	31	4	78	849
7	13	59	40	79	854
9	8	28	16	79	859
11	2	56	52	80	863
13	21	25	28	80	868
14	15	54	4	80	873
16	10	22	40	81	877
18	4	51	16	81	882
19	23	19	52	82	886
21	17	48	28	82	891
23	12	17	4	82	897
25	6	45	40	83	900
27	1	14	16	83	905
28	19	42	52	84	909
30	14	11	28	84	914

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A TA-

A TABLE *of the firſt Equation of the firſt Satellite of* Jupiter.

Nu. A	Equat. Add '	''	*Equat. Numb.* B	*Nu.* A	Equat. Add '	''	*Equat. Numb.* B
0	39	8	15	128	12	7	26
4	38	12	16	132	11	27	26
8	37	16	16	136	10	47	26
12	36	21	16	140	10	9	27
16	35	26	17	144	9	41	27
20	34	30	17	148	8	53	27
24	33	35	17	152	8	19	27
28	32	40	18	156	7	44	28
32	31	45	18	160	7	10	28
36	30	50	19	164	6	38	28
40	29	56	19	168	6	7	28
44	29	3	19	172	5	37	28
48	28	10	20	176	5	8	29
52	27	16	20	180	4	41	29
56	26	23	20	184	4	15	29
60	25	30	21	188	3	49	29
64	24	38	21	192	3	24	29
68	23	47	21	196	3	1	29
72	22	56	22	200	2	40	30
76	22	5	22	204	2	20	30
80	21	15	22	208	2	1	30
84	20	26	23	212	1	42	30
88	19	37	23	216	1	25	30
92	18	48	23	220	1	10	30
96	18	0	24	224	0	58	30
100	17	14	24	228	0	47	30
104	16	28	24	232	0	36	30
108	15	42	25	236	0	26	30
112	14	57	25	240	0	18	30
116	14	13	25	244	0	12	31
120	13	30	25	248	0	7	31
124	12	48	26	252	0	4	31
128	12	7	26	256	0	1	31

Nu. A	Equat. Add ′	″	*Equat. Numb.* B	*Nu.* A	Equat. Add ′	″	*Equat. Numb.* B
256	0	1	31	384	11	52	26
260	0	0	31	388	12	37	26
264	0	1	31	392	13	23	25
268	0	3	31	396	14	11	25
272	0	7	31	400	14	59	25
276	0	12	31	484	15	48	24
280	0	19	31	408	16	38	24
284	0	28	30	412	17	30	24
288	0	38	30	416	18	22	23
292	0	50	30	420	19	15	23
296	1	3	30	424	20	9	23
300	1	17	30	428	21	4	22
304	1	33	30	432	21	59	22
308	1	50	30	436	22	55	22
312	2	8	30	440	23	53	21
316	2	28	30	444	24	51	21
320	2	51	30	448	25	49	21
324	3	15	29	452	26	48	20
328	3	40	29	456	27	48	20
332	4	6	29	460	28	48	19
336	4	34	29	464	29	49	19
340	5	3	29	468	30	50	19
344	5	34	29	472	31	51	18
348	6	5	28	476	32	53	18
352	6	38	28	480	33	55	17
356	7	13	28	484	34	57	17
360	7	50	28	488	35	59	17
364	8	27	27	492	37	1	16
368	9	6	27	496	38	5	16
372	9	46	27	500	39	8	15
376	10	27	27	504	40	11	15
380	11	9	26	508	41	15	14
384	11	52	26	512	42	17	14

Nu. A	Equat. Add ′	″	*Equat. Numb.* B	*Nu.* A	Equat. Add ′	″	*Equat. Numb.* B
512	42	17	14	640	70	26	3
516	43	19	14	644	71	3	3
520	44	21	13	648	71	38	3
524	45	23	13	652	72	11	2
528	46	25	13	656	72	42	2
532	47	26	12	660	73	13	2
536	48	27	12	664	73	42	2
540	49	28	11	668	74	10	2
544	50	28	11	672	74	36	1
548	51	28	11	676	75	1	1
552	52	27	10	680	75	25	1
556	53	25	10	684	75	48	1
560	54	23	9	688	76	8	1
564	55	21	9	692	76	26	1
568	56	17	9	696	76	43	0
572	57	12	8	700	76	49	0
576	58	7	8	704	77	13	0
580	59	1	8	708	77	26	0
584	59	54	7	712	77	38	0
588	60	46	7	716	77	48	0
592	61	38	6	720	77	57	0
596	62	28	6	724	78	4	0
600	63	17	6	728	78	9	0
604	64	5	5	732	78	13	0
608	64	53	5	736	78	15	0
612	65	39	5	740	78	16	0
616	66	24	5	744	78	15	0
620	67	7	4	748	78	12	0
624	67	49	4	752	78	9	0
628	68	30	4	756	78	4	0
632	69	10	4	760	77	58	0
636	69	49	3	764	77	50	0
640	70	26	3	768	77	40	0

Nu. A	Equat. Add ′	″	*Equat. Numb.* B	*Nu.* A	Equat. Add ′	″	*Equat. Numb.* B
768	77	40	0	896	61	48	6
772	77	29	0	900	61	2	7
776	77	18	0	904	60	15	7
780	77	6	0	908	59	28	7
784	76	51	1	912	59	39	8
788	76	34	1	916	58	90	8
792	76	15	1	920	57	1	8
796	75	56	1	924	56	11	9
800	75	36	1	928	55	20	9
804	75	15	1	932	54	29	9
808	74	52	1	936	53	38	10
812	74	27	1	940	52	46	10
816	74	1	2	944	51	53	10
820	73	35	2	948	51	0	11
824	73	8	2	952	50	6	11
828	72	39	2	956	49	13	11
832	72	9	2	960	49	20	12
836	71	38	3	964	48	26	12
840	71	6	3	968	46	31	12
844	70	32	3	972	45	36	13
848	69	57	3	976	44	41	13
852	69	21	3	980	43	46	13
856	68	48	4	984	42	50	14
860	68	7	4	988	41	55	14
864	67	29	4	992	41	0	14
868	66	49	4	996	40	4	15
872	66	9	5	1000	39	8	15
876	65	28	5	1004	39	12	16
880	64	46	5	1008	37	16	16
884	64	3	5	1012	36	21	16
888	63	19	6	1016	35	26	17
892	62	34	6	1020	34	30	17
896	61	48	6	1024	33	35	17

Add.

Nu. B	0		100		200		300		400	
Equ	Equat. ′	″	Equat. ′	″	Equat. ′	″	Equat. ′	″	Equat. ′	″
0	14	0	12	52	9	45	5	30	1	37
4	14	0	12	46	9	36	5	20	1	30
8	13	59	12	40	9	26	5	9	1	23
12	13	59	12	35	9	17	4	59	1	16
16	13	58	12	29	9	7	4	48	1	9
20	13	57	12	23	8	58	4	38	1	3
24	13	56	12	17	8	48	4	28	0	57
28	13	54	12	11	8	38	4	18	0	52
32	13	53	12	4	8	28	4	8	0	46
36	13	51	11	56	8	17	3	58	0	40
40	13	49	11	49	8	7	3	48	0	35
44	13	47	11	42	7	57	3	39	0	31
48	13	44	11	34	7	47	3	29	0	27
52	13	41	11	27	7	36	3	19	0	23
56	13	38	11	20	7	26	3	9	0	19
60	13	36	11	13	7	16	2	59	0	16
64	13	33	11	5	7	5	2	50	0	13
68	13	29	10	57	6	55	2	41	0	10
72	13	25	10	49	6	44	2	32	0	7
76	13	20	10	40	6	33	2	24	0	5
80	13	16	10	31	6	22	2	15	0	4
84	13	11	10	21	6	11	2	7	0	3
88	13	7	10	12	6	1	1	59	0	2
92	13	2	10	3	5	51	1	52	0	1
96	12	58	9	54	5	40	1	44	0	0
100	12	52	9	45	5	30	1	37	0	0

Add.

Nu. B	500		600		700		800		900	
Equ	Equat. '	"	Equat. '	"	Equat. '	"	Equat. '	"	Equat. '	"
0	0	0	1	37	5	30	9	45	12	52
4	0	0	1	44	5	40	9	54	12	58
8	0	1	1	52	5	51	10	3	13	2
12	0	2	1	59	6	1	10	12	13	7
16	0	3	2	7	6	11	10	21	13	11
20	0	4	2	15	6	22	10	31	13	16
24	0	5	2	24	6	33	10	40	13	20
28	0	7	2	32	6	44	10	49	13	25
32	0	10	2	41	6	55	10	57	13	29
36	0	13	2	50	7	5	11	5	13	33
40	0	16	2	59	7	16	11	13	13	36
44	0	19	3	9	7	26	11	20	13	38
48	0	23	3	19	7	36	11	27	13	41
52	0	27	3	29	7	47	11	34	13	44
56	0	31	3	38	7	57	11	42	13	47
60	0	35	3	48	8	7	11	49	13	49
64	0	40	3	58	8	17	11	56	13	51
68	0	46	4	8	8	28	12	4	13	53
72	0	52	4	18	8	38	12	11	13	54
76	0	57	4	28	8	48	12	17	13	56
80	1	3	4	38	8	58	12	23	13	57
84	1	9	4	48	9	7	12	29	13	58
88	1	16	4	59	9	17	12	35	13	59
92	1	23	5	9	9	26	12	40	13	59
96	1	30	5	20	9	36	12	46	14	0
100	1	37	5	30	9	45	12	52	14	0

Add

Number	Equation.		Number
A	'	"	A
0	3	30	1000
20	3	29	980
40	3	28	960
60	3	25	940
80	3	19	920
100	3	12	900
120	3	4	880
140	2	56	860
160	2	46	840
180	2	34	820
200	2	22	800
220	2	10	780
240	1	57	760
260	1	44	740
280	1	30	720
300	1	17	700
320	1	5	680
340	0	53	660
360	0	41	640
380	0	31	620
400	0	22	600
420	0	14	580
440	0	8	560
460	0	4	540
480	0	2	520
500	0	0	500

Num.	Semiduration.			*Num.*	Semiduration.			*Num.*	Semiduration.			*Num.*	Semiduration.		
A	H.	'	"	A	H.	'	"	A	H	'	"	A	H.	'	"
0	1	5	9	250	1	7	0	500	1	5	9	750	1	7	46
10	1	4	56	260	1	7	15	510	1	4	53	760	1	7	57
20	1	4	44	270	1	7	31	520	1	4	39	770	1	8	7
30	1	4	33	280	1	7	45	530	1	4	26	780	1	8	15
40	1	4	23	290	1	7	57	540	1	4	15	790	1	8	22
50	1	4	13	300	1	8	7	550	1	4	7	800	1	8	26
60	1	4	7	310	1	8	15	560	1	4	3	810	1	8	28
70	1	4	4	320	1	8	22	570	1	4	1	820	1	8	30
80	1	4	2	330	1	8	27	580	1	4	0	830	1	8	28
90	1	4	0	340	1	8	28	590	1	4	3	840	1	8	26
100	1	4	2	350	1	8	29	600	1	4	7	850	1	8	22
110	1	4	3	360	1	8	27	610	1	4	13	860	1	8	16
120	1	4	6	370	1	8	24	620	1	4	23	870	1	8	8
130	1	4	12	380	1	8	17	630	1	4	35	880	1	8	0
140	1	4	21	390	1	8	9	640	1	4	49	890	1	7	50
150	1	4	31	400	1	7	58	650	1	5	4	900	1	7	37
160	1	4	42	410	1	7	46	660	1	5	19	910	1	7	22
170	1	4	55	420	1	7	31	670	1	5	36	920	1	7	8
180	1	5	9	430	1	7	14	680	1	5	54	930	1	6	55
190	1	5	23	440	1	6	58	690	1	6	10	940	1	6	40
200	1	5	39	450	1	6	40	700	1	6	28	950	1	6	23
210	1	5	55	460	1	6	20	710	1	6	46	960	1	6	8
220	1	6	11	470	1	6	2	720	1	7	2	970	1	5	54
230	1	6	26	480	1	5	45	730	1	7	17	980	1	5	37
240	1	6	43	490	1	5	46	740	1	7	33	990	1	5	22
250	1	7	0	500	1	5	9	750	1	7	46	1000	1	5	9

Degrees.	North Latitude ♈.													
	6		5		4		3		2		1		0	
	h.	'	h.	'	h.	'	h.	'	h.	'	h.	'	h.	'
0	23	50	23	52	23	54	23	55	23	57	23	58	0	0
1	23	54	23	56	23	57	23	59	0	1	0	2	0	4
2	23	58	23	59	0	1	0	3	0	4	0	6	0	7
3	0	2	0	3	0	4	0	6	0	8	0	9	0	11
4	0	6	0	7	0	8	0	10	0	12	0	13	0	15
5	0	9	0	10	0	12	0	14	0	16	0	17	0	18
6	0	13	0	14	0	16	0	17	0	20	0	20	0	22
7	0	17	0	18	0	20	0	21	0	23	0	24	0	26
8	0	20	0	21	0	23	0	25	0	27	0	28	0	29
9	0	24	0	25	0	27	0	28	0	30	0	31	0	33
10	0	28	0	29	0	30	0	32	0	34	0	35	0	37
11	0	31	0	32	0	34	0	36	0	37	0	39	0	40
12	0	35	0	36	0	38	0	39	0	41	0	43	0	44
13	0	39	0	40	0	41	0	43	0	44	0	46	0	48
14	0	43	0	44	0	45	0	47	0	48	0	50	0	52
15	0	47	0	48	0	48	0	51	0	52	0	54	0	55
16	0	50	0	51	0	52	0	54	0	56	0	57	0	59
17	0	54	0	55	0	56	0	58	1	0	1	1	1	3
18	0	58	0	59	1	0	1	2	1	3	1	5	1	6
19	1	1	1	2	1	4	1	5	1	7	1	9	1	10
20	1	5	1	6	1	8	1	9	1	11	1	12	1	14
21	1	9	1	10	1	12	1	13	1	14	1	16	1	18
22	1	13	1	14	1	15	1	17	1	18	1	20	1	22
23	1	16	1	17	1	19	1	21	1	22	1	24	1	26
24	1	20	1	21	1	23	1	24	1	26	1	27	1	29
25	1	24	1	25	1	27	1	28	1	30	1	31	1	33
26	1	28	1	29	1	30	1	32	1	33	1	35	1	36
27	1	32	1	33	1	34	1	36	1	37	1	39	1	40
28	1	36	1	37	1	38	1	40	1	41	1	43	1	44
29	1	39	1	40	1	42	1	43	1	45	1	46	1	48
30	1	43	1	44	1	46	1	47	1	49	1	50	1	52

Degrees.	South Latitude ♈.													
	0		1		2		3		4		5		6	
	h.	'	h.	'	h.	'	h.	'	h.	'	h.	'	h.	'
0	0	0	0	2	0	3	0	5	0	6	0	8	0	9
1	0	4	0	5	0	7	0	8	0	10	0	12	0	13
2	0	7	0	9	0	10	0	12	0	14	0	15	0	16
3	0	11	0	13	0	14	0	16	0	17	0	19	0	20
4	0	15	0	16	0	18	0	19	0	21	0	23	0	24
5	0	18	0	20	0	21	0	23	0	25	0	26	0	28
6	0	22	0	24	0	25	0	27	0	28	0	30	0	31
7	0	26	0	27	0	29	0	30	0	32	0	34	0	35
8	0	29	0	31	0	33	0	34	0	36	0	37	0	38
9	0	33	0	35	0	36	0	38	0	39	0	41	0	42
10	0	37	0	38	0	40	0	42	0	43	0	45	0	46
11	0	40	0	42	0	44	0	45	0	47	0	48	0	50
12	0	44	0	46	0	47	0	49	0	51	0	52	0	53
13	0	48	0	49	0	51	0	53	0	54	0	56	0	57
14	0	52	0	53	0	55	0	56	0	58	0	59	1	1
15	0	55	0	57	0	58	1	0	1	1	1	3	1	4
16	0	59	1	0	1	2	1	4	1	5	1	7	1	8
17	1	3	1	4	1	6	1	7	1	9	1	10	1	11
18	1	6	1	8	1	9	1	11	1	12	1	14	1	15
19	1	10	1	12	1	13	1	15	1	16	1	18	1	19
20	1	14	1	15	1	17	1	18	1	20	1	21	1	23
21	1	18	1	19	1	20	1	22	1	24	1	25	1	27
22	1	22	1	23	1	24	1	26	1	27	1	29	1	31
23	1	26	1	27	1	28	1	30	1	31	1	32	1	34
24	1	29	1	30	1	32	1	33	1	35	1	36	1	38
25	1	33	1	34	1	36	1	37	1	39	1	40	1	41
26	1	36	1	38	1	39	1	41	1	42	1	44	1	45
27	1	40	1	42	1	43	1	45	1	46	1	47	1	48
28	1	44	1	45	1	47	1	48	1	50	1	51	1	52
29	1	48	1	49	1	51	1	52	1	53	1	55	1	56
30	1	52	1	53	1	55	1	56	1	57	1	59	2	0

Degrees.	North Latitude ♉.													
	6		5		4		3		2		1		0	
	h.	'	h.	'	h.	'	h.	'	h.	'	h.	'	h.	'
0	1	43	1	44	1	46	1	47	1	49	1	50	1	52
1	1	47	1	48	1	50	1	51	1	53	1	54	1	55
2	1	51	1	52	1	54	1	55	1	56	1	58	1	59
3	1	55	1	56	1	58	1	59	2	0	2	2	2	3
4	1	59	2	0	2	1	2	3	2	4	2	6	2	7
5	2	3	2	4	2	5	2	7	2	8	2	9	2	11
6	2	7	2	8	2	9	2	11	2	12	2	13	2	15
7	2	11	2	12	2	13	2	14	2	16	2	17	2	19
8	2	15	2	16	2	17	2	18	2	20	2	21	2	23
9	2	19	2	20	2	21	2	22	2	24	2	25	2	26
10	2	23	2	24	2	25	2	26	2	28	2	29	2	30
11	2	27	2	28	2	29	2	30	2	32	2	33	2	34
12	2	31	2	32	2	33	2	34	2	36	2	37	2	38
13	2	35	2	36	2	37	2	38	2	40	2	41	2	42
14	2	39	2	40	2	41	2	42	2	44	2	45	2	46
15	2	43	2	44	2	45	2	46	2	48	2	49	2	50
16	2	47	2	48	2	49	2	50	2	52	2	53	2	54
17	2	51	2	52	2	53	2	54	2	56	2	57	2	58
18	2	55	2	56	2	57	2	59	3	0	3	1	3	2
19	2	59	3	0	3	1	3	3	3	4	3	5	3	6
20	3	3	3	4	3	6	3	7	3	8	3	9	3	10
21	3	7	3	8	3	10	3	11	3	12	3	13	3	14
22	3	11	3	12	3	14	3	15	3	16	3	17	3	18
23	3	16	3	17	3	18	3	19	3	20	3	21	3	22
24	3	20	3	21	3	22	3	23	3	24	3	25	3	26
25	3	24	3	25	3	26	3	27	3	28	3	29	3	30
26	3	28	3	29	3	31	3	32	3	33	3	34	3	35
27	3	33	3	34	3	35	3	36	3	37	3	38	3	39
28	3	37	3	38	3	39	3	40	3	41	3	42	3	43
29	3	41	3	42	3	43	3	44	3	45	3	46	3	47
30	3	45	3	46	3	47	3	48	3	49	3	50	3	51

Degrees.	South Latitude ♉.													
	0		1		2		3		4		5		6	
	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′
0	1	52	1	53	1	54	1	56	1	57	1	59	2	0
1	1	55	1	56	1	58	1	59	2	1	2	2	2	3
2	1	59	2	0	2	2	2	3	2	5	2	6	2	7
3	2	3	2	4	2	6	2	7	2	9	2	10	2	11
4	2	7	2	8	2	10	2	11	2	12	2	14	2	15
5	2	11	2	12	2	14	2	15	2	16	2	18	2	19
6	2	15	2	16	2	17	2	19	2	20	2	21	2	23
7	2	19	2	20	2	21	2	23	2	24	2	25	2	26
8	2	23	2	24	2	25	2	26	2	28	2	29	2	30
9	2	26	2	28	2	29	2	30	2	32	2	33	2	34
10	2	30	2	32	2	33	2	34	2	35	2	37	2	38
11	2	34	2	35	2	37	2	38	2	39	2	41	2	42
12	2	38	2	39	2	41	2	42	2	43	2	44	2	45
13	2	42	2	43	2	45	2	46	2	47	2	48	2	49
14	2	46	2	47	2	49	2	50	2	51	2	52	2	53
15	2	50	2	51	2	53	2	54	2	55	2	56	3	57
16	2	54	2	55	2	56	2	58	2	59	2	0	3	1
17	2	58	2	59	3	0	3	2	3	3	3	4	3	5
18	3	2	3	3	3	4	3	6	3	7	3	8	3	9
19	3	6	3	7	3	8	3	10	3	11	3	12	3	13
20	3	10	3	11	3	12	3	14	3	15	3	16	3	17
21	3	14	3	15	3	16	3	18	3	19	3	20	3	21
22	3	18	3	19	3	20	3	22	3	23	3	24	3	25
23	3	22	3	23	3	24	3	26	3	27	3	28	3	29
24	3	26	3	27	3	28	3	30	3	31	3	32	3	33
25	3	30	3	31	3	33	3	34	3	35	3	36	3	37
26	3	35	3	36	3	37	3	38	3	39	3	40	3	41
27	3	39	3	40	3	41	3	42	3	43	3	44	3	45
28	3	43	3	44	3	45	3	46	3	47	3	48	3	49
29	3	47	3	48	3	49	3	50	3	51	3	52	3	53
30	3	51	3	52	3	53	3	54	3	55	3	56	3	57

Degrees.	North Latitude II.													
	6		5		4		3		2		1		0	
	h.	′	h.	′	h	′	h.	′	h.	′	h.	′	h.	′
0	3	45	3	46	3	47	3	48	3	49	3	50	3	51
1	3	50	3	51	3	52	3	53	3	53	3	54	3	55
2	3	54	3	55	3	56	3	57	3	58	3	59	3	59
3	3	58	3	59	4	0	4	1	4	2	4	3	4	4
4	4	3	4	4	4	5	4	5	4	6	4	7	4	8
5	4	7	4	8	4	9	4	10	4	10	4	11	4	12
6	4	11	4	12	4	13	4	14	4	15	4	15	4	16
7	4	16	4	17	4	18	4	18	4	19	4	20	4	21
8	4	20	4	21	4	22	4	23	4	23	4	24	4	25
9	4	25	4	26	4	26	4	27	4	28	4	28	4	29
10	4	29	4	30	4	31	4	31	4	32	4	32	4	33
11	4	33	4	34	4	35	4	36	4	36	4	36	4	38
12	4	38	4	39	4	40	4	40	4	40	4	40	4	42
13	4	42	4	43	4	44	4	45	4	45	4	45	4	46
14	4	47	4	48	4	48	4	49	4	49	4	49	4	51
15	4	51	4	52	4	52	4	53	4	54	4	54	4	55
16	4	56	4	57	4	57	4	58	4	58	4	58	4	59
17	5	0	5	1	5	2	5	2	5	3	5	2	5	3
18	5	5	5	6	5	6	5	6	5	7	5	7	5	8
19	5	9	5	10	5	10	5	11	5	12	5	12	5	12
20	5	14	5	15	5	15	5	15	5	16	5	16	5	16
21	5	18	5	19	5	19	5	19	5	20	5	20	5	21
22	5	22	5	23	5	24	5	24	5	24	5	24	5	25
23	5	27	5	28	5	28	5	28	5	28	5	28	5	29
24	5	31	5	32	5	33	5	33	5	33	5	33	5	34
25	5	36	5	37	5	37	5	37	5	37	5	37	5	38
26	5	40	5	41	5	42	5	42	5	42	5	42	5	43
27	5	44	5	45	5	46	5	46	5	46	5	46	5	47
28	5	49	5	50	5	50	5	50	5	50	5	50	5	51
29	5	53	5	54	5	54	5	55	5	55	5	55	5	56
30	6	0	6	0	6	0	6	0	6	0	6	0	6	0

Degrees.	South Latitude ♊.													
	0		1		2		3		4		5		6	
	h.	'	h.	'	h.	'	h.	'	h.	'	h.	'	h.	'
0	3	51	3	52	3	53	3	54	3	55	3	56	3	56
1	3	55	3	56	3	57	3	58	3	59	4	0	4	1
2	3	59	4	0	4	1	4	2	4	3	4	4	4	5
3	4	4	4	5	4	5	4	6	4	7	4	8	4	9
4	4	8	4	9	4	10	4	10	4	11	4	12	4	13
5	4	12	4	13	4	14	4	14	4	15	4	16	4	17
6	4	16	4	17	4	18	4	19	4	19	4	20	4	21
7	4	21	4	21	4	22	4	23	4	24	4	24	4	25
8	4	25	4	25	4	26	4	27	4	28	4	28	4	29
9	4	29	4	30	4	30	4	31	4	32	4	32	4	33
10	4	33	4	34	4	35	4	35	4	36	4	36	4	37
11	4	38	4	38	4	39	4	39	4	40	4	41	4	42
12	4	42	4	43	4	43	4	44	4	44	4	45	4	46
13	4	46	4	47	4	47	4	48	4	48	4	49	4	50
14	4	51	4	51	4	52	4	52	4	53	4	53	4	54
15	4	55	4	55	4	56	4	56	4	57	4	57	4	58
16	4	59	5	0	5	0	5	0	5	1	5	1	5	2
17	5	3	5	4	5	5	5	5	5	5	5	6	5	7
18	5	8	5	8	5	9	5	9	5	9	5	10	5	11
19	5	12	5	12	5	13	5	13	5	14	5	14	5	15
20	5	16	5	17	5	17	5	17	5	18	5	18	5	19
21	5	21	5	21	5	21	5	22	5	22	5	22	5	23
22	5	25	5	25	5	26	5	26	5	26	5	26	5	27
23	5	29	5	29	5	30	5	30	5	30	5	31	5	32
24	5	34	5	34	5	34	5	34	5	35	5	35	5	36
25	5	38	5	38	5	38	5	38	5	39	5	40	5	40
26	5	43	5	43	5	43	5	43	5	43	5	44	5	44
27	5	47	5	47	5	47	5	47	5	48	5	48	5	48
28	5	51	5	52	5	52	5	52	5	52	5	52	5	52
29	5	56	5	56	5	56	5	56	5	56	5	56	5	56
30	6	0	6	0	6	0	6	0	6	0	6	0	6	0

Degrees.	North Latitude ♋.													
	6		5		4		3		2		1		0	
	h.	'	h.	'	h.	'	h.	'	h.	'	h.	'	h.	'
0	6	0	6	0	6	0	6	0	6	0	6	0	6	0
1	6	4	6	4	6	4	6	4	6	4	6	4	6	4
2	6	8	6	8	6	9	6	9	6	9	6	9	6	9
3	6	13	6	13	6	14	6	13	6	13	6	13	6	13
4	6	17	6	17	6	18	6	18	6	18	6	18	6	17
5	6	22	6	22	6	23	6	22	6	22	6	22	6	22
6	6	27	6	27	6	27	6	27	6	26	6	25	6	26
7	6	31	6	31	6	31	6	31	6	31	6	31	6	31
8	6	35	6	35	6	36	6	36	6	36	6	35	6	35
9	6	40	6	40	6	40	6	40	6	40	6	39	6	39
10	6	44	6	44	6	45	6	45	6	44	6	44	6	44
11	9	49	6	49	6	49	6	49	6	49	6	48	6	48
12	6	54	6	53	6	53	6	53	6	53	6	52	6	52
13	6	59	6	58	6	58	6	58	6	57	6	56	6	56
14	7	4	7	3	7	3	7	2	7	2	7	1	7	0
15	7	9	7	8	7	7	7	7	7	6	7	5	7	5
16	7	13	7	12	7	12	7	11	7	10	7	9	7	9
17	7	18	7	17	7	16	7	15	7	15	7	14	7	13
18	7	22	7	21	7	20	7	20	7	19	7	18	7	18
19	7	26	7	25	7	25	7	24	7	23	7	23	7	22
20	7	31	7	30	7	29	7	29	7	28	7	27	7	27
21	7	35	7	34	7	34	5	33	7	32	7	31	7	31
22	7	39	7	38	7	37	7	37	7	36	7	36	7	35
23	7	44	7	43	7	42	7	42	7	41	7	40	7	39
24	7	48	7	47	7	47	7	46	7	45	7	44	7	44
25	7	53	7	52	7	51	7	51	7	50	7	49	7	48
26	7	57	7	56	7	55	7	55	7	54	7	53	7	52
27	8	2	8	1	8	0	7	59	7	58	7	57	7	56
28	8	6	8	5	8	4	8	3	8	2	8	1	8	0
29	8	10	8	9	8	8	8	7	8	6	8	5	8	4
30	8	14	8	13	8	12	8	11	8	10	8	9	8	8

Degrees.	South Latitude ♋.													
	0		1		2		3		4		5		6	
	h.	'	h.	'	h.	'	h.	'	h.	'	h.	'	h.	'
0	6	0	6	0	6	0	6	0	6	0	6	0	6	0
1	6	4	6	4	6	4	6	4	6	4	6	4	6	4
2	6	9	6	9	6	9	6	9	6	9	6	8	6	8
3	6	13	6	13	6	13	6	13	6	13	6	13	6	13
4	6	17	6	17	6	17	6	17	6	17	6	17	6	17
5	6	22	6	22	6	22	6	21	6	21	6	21	6	21
6	6	26	6	26	6	26	6	26	6	25	6	25	6	25
7	6	31	6	30	6	30	6	30	6	29	6	29	6	29
8	6	35	6	34	6	34	6	34	6	34	6	34	6	33
9	6	39	6	39	6	39	6	38	6	38	6	38	6	37
10	6	44	6	43	6	43	6	43	6	42	6	42	6	41
11	6	48	6	47	6	47	6	47	6	46	6	46	6	45
12	6	52	6	52	6	51	6	51	6	51	6	50	6	50
13	6	56	6	56	6	56	6	55	6	55	6	54	6	54
14	7	0	7	0	7	0	6	59	6	59	6	59	6	58
15	7	5	7	5	7	4	7	4	7	3	7	3	7	2
16	7	9	7	9	7	8	7	8	7	8	7	7	7	6
17	7	13	7	13	7	13	7	12	7	12	7	11	7	10
18	7	18	7	17	7	17	7	16	7	16	7	15	7	14
19	7	22	7	22	7	21	7	21	7	20	7	19	7	18
20	7	27	7	26	7	25	7	25	7	24	7	23	7	22
21	7	31	7	30	7	30	7	29	7	28	7	28	7	27
22	7	35	7	34	7	34	7	33	7	32	7	32	7	31
23	7	39	7	39	7	38	7	37	7	36	7	36	7	35
24	7	44	7	43	7	42	7	41	7	41	7	40	7	39
25	7	48	7	47	7	46	7	46	7	45	7	44	7	43
26	7	52	7	51	7	50	7	50	7	49	7	48	7	47
27	7	56	7	55	7	55	7	54	7	53	7	52	7	51
28	8	0	8	0	7	59	7	58	7	57	7	56	7	55
29	8	4	8	4	8	3	8	2	8	1	8	0	7	59
30	8	8	8	8	8	7	8	6	8	5	8	4	8	3

Degrees.	North Latitude ♌.													
	6		5		4		3		2		1		0	
	h.	'	h.	'	h.	'	h.	'	h.	'	h.	'	h.	'
0	8	14	8	13	8	12	8	11	8	10	8	9	8	8
1	8	19	8	18	8	17	8	15	8	14	8	13	8	13
2	8	23	8	22	8	21	8	20	8	19	8	18	8	17
3	8	27	8	26	8	25	8	24	8	23	8	22	8	21
4	8	31	8	30	8	29	8	28	8	27	8	26	8	25
5	8	35	8	35	8	34	8	33	8	32	8	31	8	29
6	8	39	8	39	8	38	8	37	8	36	8	35	8	34
7	8	44	8	43	8	42	8	41	8	40	8	39	8	38
8	8	48	8	47	8	46	8	45	8	44	8	43	8	42
9	8	53	8	52	8	50	8	49	8	48	8	47	8	46
10	8	57	8	56	8	54	8	53	8	52	8	51	8	50
11	9	1	9	0	8	59	8	57	8	56	8	55	8	54
12	9	5	9	4	9	3	9	1	9	0	8	59	8	58
13	9	9	9	8	9	7	9	5	9	4	9	3	9	2
14	9	13	9	12	9	11	9	10	9	8	9	7	9	6
15	9	17	9	16	9	15	9	14	9	12	9	11	9	10
16	9	21	9	20	9	19	9	18	9	16	9	15	9	14
17	9	25	9	24	9	24	9	22	9	20	9	19	9	18
18	9	29	9	28	9	27	9	26	9	24	9	23	9	22
19	9	33	9	32	9	31	9	30	9	28	9	27	9	26
20	9	37	9	36	9	35	9	34	9	32	9	31	9	30
21	9	41	9	40	9	39	9	38	9	36	9	35	9	34
22	9	45	9	44	9	43	9	42	9	40	9	39	9	38
23	9	49	9	48	9	47	9	46	9	44	9	43	9	41
24	9	53	9	52	9	51	9	49	9	48	9	47	9	45
25	9	57	9	56	9	55	9	53	9	52	9	51	9	49
26	10	1	10	0	9	59	9	57	9	56	9	54	9	53
27	10	5	10	4	10	3	10	1	10	0	9	58	9	57
28	10	9	10	8	10	6	10	5	10	4	10	2	10	1
29	10	13	10	12	10	10	10	9	10	8	10	6	10	5
30	10	17	10	16	10	14	10	13	10	12	10	10	10	8

South Latitude ♌.

Degrees.	0		1		2		3		4		5		6	
	h.	'	h.	'	h.	'	h.	'	h.	'	h.	'	h.	'
0	8	8	8	8	8	7	8	6	8	5	8	4	8	3
1	8	13	8	12	8	11	8	10	8	9	8	8	8	7
2	8	17	8	16	8	15	8	14	8	13	8	12	8	11
3	8	21	8	20	8	19	8	18	8	17	8	16	8	15
4	8	25	8	24	8	23	8	22	8	21	8	20	8	19
5	8	29	8	28	8	27	8	26	8	25	8	24	8	23
6	8	34	8	33	8	31	8	30	8	29	8	28	8	27
7	8	38	8	37	8	36	8	34	8	33	8	32	8	31
8	8	42	8	41	8	40	8	38	8	37	8	36	8	35
9	8	46	8	45	8	44	8	42	8	41	8	40	8	39
10	8	50	8	49	8	48	8	46	8	45	8	44	8	43
11	8	54	8	53	8	52	8	50	8	49	8	48	8	47
12	8	58	8	57	8	56	8	54	8	53	8	52	8	51
13	9	2	9	1	9	0	8	58	8	57	8	56	8	55
14	9	6	9	5	9	4	9	2	9	1	9	0	8	59
15	9	10	9	9	9	7	9	6	9	5	9	4	9	0
16	9	14	9	13	9	11	9	10	9	9	9	8	9	7
17	9	18	9	17	9	15	9	14	9	13	9	12	9	11
18	9	22	9	21	9	19	9	18	9	17	9	16	9	15
19	9	26	9	24	9	23	9	22	9	21	9	20	9	19
20	9	30	9	28	9	27	9	26	9	25	9	23	9	22
21	9	34	9	32	9	31	9	30	9	29	9	27	9	26
22	9	38	9	36	9	35	9	34	9	32	9	31	9	30
23	9	41	9	40	9	39	9	38	9	36	9	35	9	34
24	9	45	9	44	9	43	9	41	9	40	9	39	9	38
25	9	49	9	48	9	46	9	45	9	44	9	42	9	41
26	9	53	9	52	9	50	9	49	9	48	9	46	9	45
27	9	57	9	56	9	54	9	53	9	51	9	50	9	49
28	10	1	9	59	9	58	9	57	9	55	9	54	9	53
29	10	5	10	3	10	2	10	0	9	59	9	57	9	56
30	10	8	10	7	10	6	10	4	10	3	10	1	10	0

♌ North Latitude ♍.

Degrees.	6		5		4		3		2		1		0	
	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′
0	10	17	10	16	10	14	10	13	10	11	10	10	10	8
1	10	21	10	20	10	18	10	17	10	15	10	14	10	12
2	10	24	10	23	10	22	10	20	10	19	10	18	10	16
3	10	28	10	27	10	26	10	24	10	23	10	21	10	20
4	10	32	10	31	10	30	10	28	10	27	10	25	10	24
5	10	36	10	35	10	33	10	32	10	30	10	29	10	27
6	10	40	10	39	10	37	10	36	10	34	10	33	10	31
7	10	44	10	43	10	41	10	39	10	38	10	36	10	35
8	10	47	10	46	10	45	10	43	10	42	10	40	10	39
9	10	51	10	50	10	49	10	47	10	45	10	44	10	42
10	10	55	10	54	10	52	10	51	10	49	10	48	10	46
11	10	59	10	58	10	56	10	55	10	53	10	51	10	50
12	11	2	11	1	11	0	10	58	10	57	10	55	10	54
13	11	6	11	5	11	4	11	2	11	1	10	59	10	57
14	11	10	11	9	11	7	11	6	11	4	11	3	11	1
15	11	14	11	13	11	11	11	9	11	8	11	6	11	5
16	11	17	11	16	11	15	11	13	11	12	11	10	11	8
17	11	21	11	20	11	18	11	17	11	15	11	14	11	12
18	11	25	11	24	11	22	11	21	11	19	11	17	11	16
19	11	29	11	28	11	26	11	24	11	23	11	21	11	20
20	11	33	11	32	11	30	11	28	11	27	11	25	11	23
21	11	36	11	35	11	33	11	32	11	30	11	29	11	27
22	11	40	11	39	11	37	11	35	11	34	11	32	11	31
23	11	43	11	42	11	41	11	39	11	37	11	36	11	34
24	11	47	11	46	11	44	11	43	11	41	11	40	11	38
25	11	51	11	50	11	48	11	47	11	45	11	43	11	42
26	11	54	11	53	11	52	11	50	11	48	11	47	11	46
27	11	58	11	57	11	55	11	54	11	52	11	51	11	49
28	12	2	12	1	11	59	11	57	11	56	11	54	11	53
29	12	5	12	4	12	3	12	1	11	59	11	58	11	56
30	12	9	12	8	12	6	12	5	12	3	12	1	12	0

Degrees.	South Latitude ♍.													
	0		1		2		3		4		5		6	
	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′
0	10	8	10	7	10	6	10	4	10	3	10	1	10	0
1	10	12	10	11	10	9	10	8	10	7	10	5	10	4
2	10	16	10	14	10	13	10	12	10	10	10	9	10	8
3	10	20	10	18	10	17	10	15	10	14	10	13	10	12
4	10	24	10	22	10	21	10	19	10	18	10	16	10	15
5	10	27	10	26	10	24	10	23	10	21	10	20	10	19
6	10	31	10	30	10	28	10	27	10	25	10	24	10	23
7	10	35	10	33	10	32	10	30	10	29	10	27	10	26
8	10	39	10	37	10	36	10	34	10	33	10	31	10	30
9	10	42	10	41	10	39	10	38	10	36	10	35	10	34
10	10	46	10	45	10	43	10	42	10	40	10	39	10	38
11	10	50	10	48	10	47	10	45	10	44	10	42	10	41
12	10	54	10	52	10	51	10	49	10	48	10	46	10	45
13	10	57	10	56	10	54	10	53	10	51	10	50	10	49
14	11	1	11	0	10	58	10	56	10	55	10	53	10	52
15	11	5	11	3	11	2	11	0	10	59	10	57	10	56
16	11	8	11	7	11	5	11	4	11	2	11	1	11	0
17	11	12	11	11	11	9	11	7	11	6	11	4	11	3
18	11	16	11	14	11	13	11	11	11	10	11	8	11	7
19	11	20	11	18	11	16	11	15	11	13	11	12	11	11
20	11	23	11	22	11	20	11	19	11	17	11	16	11	15
21	11	27	11	25	11	24	11	22	11	21	11	19	11	18
22	11	31	11	29	11	27	11	26	11	24	11	23	11	22
23	11	34	11	33	11	31	11	29	11	28	11	26	11	25
24	11	38	11	36	11	35	11	33	11	32	51	30	11	29
25	11	42	11	40	11	39	11	37	11	35	11	34	11	33
26	11	46	11	44	11	42	11	41	11	39	11	37	11	36
27	11	49	11	47	11	46	11	44	11	43	11	41	11	40
28	11	53	11	51	11	49	11	48	11	46	11	45	11	44
29	11	56	11	55	11	53	11	52	11	50	11	48	11	48
30	12	0	11	58	11	57	11	55	11	54	11	52	11	51

North Latitude ♎.

Degrees.	6		5		4		3		2		1		0	
	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′
0	12	9	12	8	12	6	12	5	12	3	12	2	12	0
1	12	13	12	12	12	10	12	8	12	7	12	5	12	4
2	12	16	12	15	12	14	12	12	12	10	12	9	12	7
3	12	20	12	19	12	17	12	16	12	14	12	13	12	11
4	12	24	12	23	12	21	12	19	12	18	12	16	12	15
5	12	27	12	26	12	25	12	23	12	21	12	20	12	18
6	12	31	12	30	12	28	12	27	12	25	12	24	12	22
7	12	35	12	34	12	32	12	30	12	29	12	27	12	26
8	12	38	12	37	12	36	12	34	12	33	12	31	12	29
9	12	42	12	41	12	39	12	38	12	36	12	35	12	33
10	12	46	12	45	12	43	12	42	12	40	12	38	12	37
11	12	49	12	48	12	47	12	45	12	44	12	42	12	40
12	12	53	12	52	12	51	12	49	12	47	12	46	12	44
13	12	57	12	56	12	54	12	53	12	51	12	49	12	48
14	13	0	12	59	12	58	12	56	12	55	12	53	12	52
15	13	4	13	3	13	1	13	0	12	58	12	57	12	55
16	13	8	13	7	13	5	13	4	13	2	13	0	12	59
17	13	11	13	10	13	9	13	7	13	6	13	4	13	3
18	13	15	13	14	13	12	13	11	13	9	13	8	13	6
19	13	19	13	18	13	16	13	15	13	13	13	12	13	10
20	13	22	13	21	13	20	13	18	13	17	13	15	13	14
21	13	26	13	25	13	24	13	22	13	20	13	19	13	18
22	13	30	13	29	13	27	13	26	13	24	13	23	13	22
23	13	33	13	32	13	31	13	30	13	28	13	27	13	26
24	13	37	13	36	13	35	13	33	13	32	13	30	13	29
25	13	41	13	40	13	39	13	37	13	36	13	34	13	33
26	13	45	13	44	13	42	13	41	13	39	13	38	13	36
27	13	48	13	47	13	46	13	45	13	43	13	42	13	40
28	13	52	13	51	13	50	13	48	13	47	13	45	13	44
29	13	56	13	55	13	53	13	52	13	51	13	49	13	48
30	14	0	13	59	13	57	13	56	13	55	13	54	13	52

Degrees.	South Latitude ♎.													
	0		1		2		3		4		5		6	
	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′
0	12	0	11	58	11	57	11	55	11	54	11	52	11	50
1	12	4	12	2	12	1	11	59	11	57	11	56	11	54
2	12	7	12	6	12	4	12	3	12	1	11	59	11	58
3	12	11	12	9	12	8	12	6	12	5	12	3	12	2
4	12	15	12	13	12	12	12	10	12	8	12	7	12	6
5	12	18	12	17	12	15	12	14	12	12	12	10	12	9
6	12	22	12	20	12	19	12	17	12	16	12	14	12	13
7	12	26	12	24	12	23	13	21	12	19	12	18	12	17
8	12	29	12	28	12	26	12	25	12	23	12	21	12	20
9	12	33	12	31	12	30	12	28	12	27	12	25	12	24
10	12	37	12	35	12	34	12	32	12	30	12	29	12	28
11	12	40	12	39	12	37	12	36	12	34	12	32	12	31
12	12	44	12	43	12	41	12	39	12	38	12	36	12	35
13	12	48	12	46	12	44	12	43	12	41	12	40	12	39
14	12	52	12	50	12	48	12	47	12	45	12	44	12	43
15	12	55	12	54	12	52	12	51	12	49	12	48	12	47
16	12	59	12	57	12	56	12	54	12	52	12	52	12	51
17	13	3	13	1	13	0	12	58	12	56	12	55	12	54
18	13	6	13	5	13	3	13	2	13	0	12	59	12	58
19	13	10	13	9	13	7	13	5	13	4	13	2	13	1
20	13	14	13	12	13	11	13	9	13	8	13	6	13	5
21	13	18	13	16	13	14	13	13	13	11	13	10	13	9
22	13	22	13	20	13	18	13	17	13	15	13	14	13	13
23	13	26	13	24	13	22	13	21	13	19	13	17	13	16
24	13	29	13	27	13	26	13	24	13	23	13	21	13	20
25	13	33	13	32	13	30	13	28	13	27	13	25	13	24
26	13	36	13	35	13	33	13	32	13	30	13	29	13	28
27	13	40	13	39	13	37	13	36	13	34	13	33	13	32
28	13	44	13	43	13	41	13	40	13	38	13	37	13	36
29	13	48	13	46	13	45	13	43	13	42	13	40	13	39
30	13	52	13	50	13	49	13	47	13	46	13	44	13	43

Degrees.	North Latitude ♏.													
	6		5		4		3		2		1		0	
	h.	′	h.	′	h	′	h.	′	h.	′	h.	′	h.	′
0	14	0	13	59	13	57	13	56	13	54	13	53	13	52
1	14	3	14	2	14	1	13	59	13	58	13	56	13	55
2	14	7	14	6	14	5	14	3	14	2	14	0	13	59
3	14	11	14	10	14	9	14	7	14	6	14	4	14	3
4	14	15	14	14	14	12	14	11	14	10	14	8	14	7
5	14	19	14	18	14	16	14	15	14	14	14	12	14	11
6	14	22	14	21	14	20	14	19	14	17	14	16	14	15
7	14	26	14	25	14	24	14	23	14	21	14	20	14	19
8	14	30	14	29	14	28	14	26	14	25	14	24	14	23
9	14	34	14	33	14	32	14	30	14	29	14	28	14	26
10	14	38	14	37	14	35	14	34	14	33	14	32	14	30
11	14	42	14	41	14	39	14	38	14	37	14	35	14	34
12	14	45	14	44	14	43	14	42	14	41	14	39	14	38
13	14	49	14	48	14	47	14	46	14	45	14	43	14	42
14	14	53	14	52	14	51	14	50	14	49	14	47	14	46
15	14	57	14	56	14	55	14	54	14	53	14	51	14	50
16	15	1	15	0	14	59	14	58	14	56	14	55	14	54
17	15	5	15	4	15	3	15	2	15	0	14	59	14	58
18	15	9	15	8	15	7	15	6	15	4	15	3	15	2
19	15	13	15	12	15	11	15	10	15	8	15	7	15	6
20	15	17	15	16	15	15	15	14	15	12	15	12	15	10
21	15	21	15	20	15	19	15	18	15	16	15	15	15	14
22	15	25	15	24	15	23	15	22	15	20	15	19	15	18
23	15	29	15	28	15	27	15	26	15	24	15	23	15	22
24	15	33	15	32	15	31	15	30	15	28	15	27	15	26
25	15	37	15	36	15	35	15	34	15	33	15	31	15	30
26	15	41	15	40	15	39	15	38	15	37	15	35	15	35
27	15	45	15	44	15	43	15	42	15	41	15	40	15	39
28	15	49	15	48	15	47	15	46	15	45	15	44	15	43
29	15	53	15	52	15	51	15	50	15	49	15	48	15	47
30	15	57	15	56	15	55	15	54	15	53	15	52	15	51

Degrees.	South Latitude ♏.													
	0		1		2		3		4		5		6	
	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′
0	13	52	13	50	13	49	13	47	13	46	13	44	13	43
1	13	55	13	54	13	53	13	51	13	50	13	48	13	47
2	13	59	13	58	13	56	13	55	13	54	13	52	13	51
3	14	59	14	2	14	0	13	59	13	58	13	56	13	55
4	14	7	14	6	14	4	14	3	14	1	14	0	13	58
5	14	11	14	9	14	8	14	7	14	5	14	4	14	2
6	14	15	14	13	14	12	14	11	14	9	14	8	14	6
7	14	19	14	17	14	16	14	14	14	13	14	12	14	10
8	14	23	14	21	14	20	14	18	14	17	14	16	14	14
9	14	26	14	25	14	24	14	22	14	21	14	20	14	18
10	14	30	14	29	14	28	14	26	14	25	14	24	14	22
11	14	34	14	33	14	32	14	30	14	29	14	28	14	26
12	14	38	14	37	14	36	14	34	14	33	14	32	14	30
13	14	42	14	41	14	40	14	38	14	37	14	36	14	34
14	14	46	14	45	14	44	14	42	14	41	14	40	14	38
15	14	50	14	49	14	48	14	46	14	45	14	44	14	42
16	14	54	14	53	14	52	14	50	14	49	14	48	14	46
17	14	58	14	57	14	56	14	54	14	53	14	52	14	50
18	15	2	15	1	15	0	14	58	14	57	14	56	14	54
19	15	6	15	5	15	4	15	3	15	1	15	0	14	58
20	15	10	15	9	15	8	15	7	15	6	15	4	15	2
21	15	14	15	13	15	12	15	11	15	10	15	8	15	6
22	15	18	15	17	15	16	15	15	15	14	15	13	15	11
23	15	22	15	21	15	20	15	19	15	18	15	17	15	15
24	15	26	15	25	15	24	15	23	15	22	15	21	15	20
25	15	30	15	29	15	28	15	27	15	26	15	25	15	24
26	15	35	15	34	15	33	15	32	15	31	15	29	15	28
27	15	39	15	38	15	37	15	36	15	35	15	34	15	32
28	15	43	15	42	15	41	15	40	15	39	15	38	15	37
29	15	47	15	46	15	45	15	44	15	43	15	42	15	41
30	15	51	15	50	15	49	15	48	15	47	15	46	15	45

Degrees.	North Latitude ♐.													
	6		5		4		3		2		1		0	
	h.	'	h.	'	h.	'	h.	'	h.	'	h.	'	h.	'
0	15	57	15	56	15	55	15	54	15	53	15	52	15	51
1	16	1	16	0	15	59	15	58	15	37	15	56	15	55
2	16	5	16	4	16	3	16	2	16	1	16	0	16	0
3	16	9	16	8	16	7	16	6	16	5	16	4	16	4
4	16	13	16	12	16	11	16	10	16	10	16	9	16	8
5	16	17	16	16	16	15	16	14	16	14	16	13	16	12
6	16	21	16	20	16	19	16	19	16	18	16	17	16	16
7	16	25	16	24	16	24	16	23	16	22	16	21	16	21
8	16	29	16	28	16	28	16	27	16	26	16	25	16	25
9	16	33	16	32	16	31	16	31	16	30	16	30	16	29
10	16	37	16	36	16	35	16	35	16	35	16	34	16	33
11	16	42	16	41	16	40	16	39	16	39	16	38	16	38
12	16	46	16	45	16	44	16	44	16	43	16	42	16	42
13	16	50	16	49	16	48	16	48	16	47	16	46	16	46
14	16	54	16	53	16	52	16	52	16	52	16	51	16	51
15	16	58	16	57	16	57	16	56	16	56	16	55	16	55
16	17	2	17	1	17	1	17	0	17	0	17	0	16	59
17	17	7	17	6	17	5	17	5	17	4	17	4	17	3
18	17	11	17	10	17	9	17	9	17	9	17	8	17	8
19	17	15	17	14	17	14	17	13	17	13	17	12	17	12
20	17	19	17	18	17	18	17	17	17	17	17	17	17	16
21	17	23	17	22	17	22	17	22	17	21	17	21	17	21
22	17	27	17	26	17	26	17	26	17	26	17	25	17	25
23	17	32	17	31	17	30	17	30	17	30	17	30	17	29
24	17	36	17	35	17	35	17	34	17	34	17	34	17	34
25	17	41	17	40	17	39	17	39	17	38	17	38	17	38
26	17	45	17	44	17	43	17	43	17	42	17	42	17	42
27	17	49	17	48	17	47	17	47	17	47	17	46	17	46
28	17	53	17	52	17	51	17	51	17	51	17	51	17	51
29	17	57	17	56	17	55	17	55	17	55	17	55	17	55
30	18	0	18	0	18	0	18	0	18	0	18	0	18	0

Degrees.	South Latitude ♐.													
	0		1		2		3		4		5		6	
	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′
0	15	51	15	50	15	49	15	48	15	47	15	46	15	45
1	15	55	15	54	15	53	15	53	15	52	15	51	15	51
2	16	0	15	59	15	58	15	57	15	56	15	55	15	55
3	16	4	16	3	16	2	16	1	16	0	15	59	15	59
4	16	8	16	7	16	6	16	5	16	4	16	4	16	3
5	16	12	16	11	16	10	16	10	16	9	16	8	16	7
6	16	16	16	15	16	15	16	14	16	13	16	12	16	11
7	16	21	16	20	16	19	16	18	16	18	16	17	16	16
8	16	25	16	24	16	23	16	23	16	22	16	21	16	20
9	16	29	16	28	16	27	16	27	16	26	16	26	16	25
10	16	33	16	32	16	31	16	31	16	31	16	30	16	29
11	16	38	16	37	16	36	16	36	16	35	16	34	16	33
12	16	42	16	41	16	40	16	40	16	39	16	39	16	38
13	16	46	16	45	16	45	16	45	16	44	16	43	16	42
14	16	51	16	50	16	49	16	49	16	48	16	48	16	47
15	16	55	16	54	16	54	16	53	16	53	16	52	16	51
16	16	59	16	58	16	58	16	58	16	57	16	57	16	56
17	17	3	17	2	17	2	17	2	17	2	17	1	17	0
18	17	8	17	7	17	7	17	7	17	6	15	6	17	5
19	17	12	17	11	17	11	17	11	17	11	17	10	17	9
20	17	16	17	15	17	15	17	15	17	15	17	15	17	14
21	17	21	17	20	17	19	17	19	17	19	17	19	27	18
22	17	25	17	24	17	24	17	24	17	24	17	23	17	22
23	17	29	17	28	17	28	17	28	17	28	17	28	17	27
24	17	34	17	33	17	33	17	33	17	33	17	32	17	31
25	17	38	17	37	17	37	17	37	17	37	17	37	17	36
26	17	42	17	41	17	41	17	41	17	41	17	41	17	40
27	17	46	17	45	17	45	17	45	17	45	17	45	17	44
28	17	51	17	50	17	50	17	50	17	50	17	50	17	50
29	17	55	17	55	17	55	17	55	17	55	17	55	17	55
30	18	0	18	0	18	0	18	0	18	0	18	0	18	0

Degrees.	North Latitude ♑.													
	6		5		4		3		2		1		0	
	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′
0	18	0	18	0	18	0	18	0	18	0	18	0	18	0
1	18	4	18	4	18	4	18	4	18	4	18	4	18	4
2	18	8	18	8	18	9	18	9	18	9	18	9	18	9
3	18	13	18	13	18	13	18	13	18	13	18	13	18	13
4	18	17	18	17	18	17	18	17	18	17	18	17	18	17
5	18	21	18	21	18	21	18	21	18	22	18	22	18	22
6	18	25	18	25	18	25	18	26	18	26	18	26	18	26
7	18	29	18	30	18	29	18	30	18	30	18	30	18	31
8	18	33	18	34	18	33	18	35	18	35	18	35	18	35
9	18	37	18	38	18	38	18	39	18	39	18	39	18	39
10	18	41	18	42	18	42	18	43	18	43	18	43	18	44
11	18	45	18	46	18	46	18	47	18	47	18	47	18	48
12	18	50	18	50	18	51	18	51	18	51	18	51	18	52
13	18	54	18	54	18	55	18	55	18	56	18	56	18	56
14	18	58	18	59	18	59	18	59	19	0	19	0	19	1
15	19	2	19	3	19	3	19	4	19	4	19	5	19	5
16	19	6	19	7	19	8	19	8	19	8	19	9	19	9
17	19	10	19	11	19	12	19	12	19	13	19	13	19	14
18	19	14	19	15	19	16	19	16	19	17	19	17	19	18
19	19	18	19	19	19	20	19	21	19	21	19	22	19	22
20	19	22	19	23	19	24	19	25	19	25	19	26	19	27
21	19	27	19	28	19	28	19	29	19	30	19	30	19	31
22	19	31	19	32	19	32	19	33	19	34	19	34	19	36
23	19	35	19	36	19	36	19	37	19	38	19	39	19	40
24	19	39	19	40	19	41	19	41	19	42	19	43	19	44
25	19	43	19	44	19	45	19	46	19	46	19	47	19	48
26	19	47	19	48	19	49	19	50	19	50	19	51	19	52
27	19	51	19	52	19	53	19	54	19	54	19	55	19	56
28	19	55	19	56	19	57	19	58	19	59	20	0	20	0
29	19	59	20	0	20	1	20	2	20	3	20	4	20	5
30	20	3	20	4	20	5	20	6	20	7	20	8	20	9

Degrees.	South Latitude VS.													
	0		1		2		3		4		5		6	
	h.	'	h.	'	h.	'	h.	'	h.	'	h.	'	h.	'
0	18	0	18	0	18	0	18	0	18	0	18	0	18	0
1	18	4	18	4	18	4	18	4	18	4	18	5	18	5
2	18	9	18	9	18	9	18	9	18	9	18	9	18	9
3	18	13	18	13	18	13	18	13	18	14	18	14	18	14
4	18	17	18	17	18	17	18	18	18	18	18	18	18	19
5	18	22	18	22	18	22	18	22	18	23	18	23	18	23
6	18	26	18	27	18	27	18	27	18	27	18	27	18	27
7	18	31	18	31	18	31	18	31	18	32	18	32	18	32
8	18	35	18	35	18	35	18	36	18	36	18	36	18	36
9	18	39	18	39	18	40	18	40	18	40	18	40	18	40
10	18	44	18	44	18	43	18	45	18	45	18	45	18	45
11	18	48	18	48	18	49	18	49	18	49	18	50	18	50
12	18	52	18	52	18	53	18	53	18	53	18	54	18	54
13	18	56	18	56	18	57	18	57	18	58	18	58	18	59
14	19	1	19	1	19	2	19	2	19	3	19	3	19	4
15	19	5	19	5	19	6	19	7	19	7	19	8	19	8
16	19	9	19	9	19	10	19	11	19	12	19	12	19	12
17	19	14	19	14	19	15	19	15	19	16	19	17	19	17
18	19	18	19	18	19	19	19	20	19	20	19	21	19	21
19	19	22	19	22	19	23	19	24	19	25	19	25	19	25
20	19	27	19	27	19	28	19	29	19	29	19	30	19	30
21	19	31	19	31	19	32	19	33	19	34	19	34	19	34
22	19	36	19	36	19	36	19	37	19	37	19	38	19	38
23	19	40	19	40	19	41	19	42	19	42	19	43	19	43
24	19	44	19	44	19	45	19	46	19	47	19	47	19	47
25	19	48	19	49	19	50	19	51	19	51	19	52	19	52
26	19	52	19	53	19	54	19	55	19	55	19	56	19	56
27	19	56	19	57	19	58	19	59	20	0	20	1	20	1
28	20	0	20	1	20	2	20	3	20	4	20	5	20	5
29	20	5	20	5	20	6	20	7	20	8	20	9	20	9
30	20	9	20	10	20	11	20	11	20	12	20	13	20	14

Degrees.	North Latitude ♒.													
	6		5		4		3		2		1		0	
	h.	'	h.	'	h.	'	h.	'	h.	'	h.	'	h.	'
0	20	3	20	4	20	5	20	6	20	7	20	8	20	9
1	20	7	20	8	20	9	20	10	20	11	20	12	20	13
2	20	11	20	12	20	13	20	14	20	15	20	16	20	17
3	20	15	20	16	20	17	20	18	20	19	20	20	20	21
4	20	19	20	20	20	21	20	22	20	23	20	24	20	25
5	20	23	20	24	20	25	20	26	20	27	20	28	20	29
6	20	27	20	28	20	29	20	30	20	31	20	33	20	34
7	20	31	20	32	20	33	20	34	20	36	20	37	20	38
8	20	35	20	36	20	37	20	38	20	40	20	41	20	42
9	20	39	20	40	20	41	20	42	20	44	20	45	20	46
10	20	43	20	44	20	45	20	46	20	48	20	49	20	50
11	20	47	20	48	20	49	20	50	20	52	20	53	20	54
12	20	51	20	52	20	53	20	54	20	56	20	57	20	58
13	20	55	20	56	20	57	20	58	21	0	21	1	21	2
14	20	59	21	0	21	1	21	3	21	4	21	5	21	6
15	21	3	21	4	21	5	21	6	21	7	21	9	21	10
16	21	7	21	8	21	9	21	10	21	11	21	13	21	14
17	21	11	21	12	21	13	21	14	21	15	21	17	21	18
18	21	15	21	16	21	17	21	18	21	19	21	21	21	22
19	21	18	21	19	21	21	21	22	21	23	21	24	21	26
20	21	22	21	23	21	25	21	26	21	27	21	28	21	30
21	21	26	21	27	21	29	21	30	21	31	21	32	21	34
22	21	30	21	31	21	32	21	34	21	35	21	36	21	38
23	21	34	21	35	21	36	21	37	21	39	21	40	21	41
24	21	38	21	39	21	40	21	41	21	43	21	44	21	45
25	21	41	21	42	21	44	21	45	21	46	21	48	21	49
26	21	45	21	46	21	48	21	49	21	50	21	52	21	53
27	21	49	21	50	21	52	21	53	21	54	21	56	21	57
28	21	53	21	54	21	55	21	57	21	58	21	59	22	1
29	21	56	21	57	21	59	22	0	22	2	22	3	22	5
30	22	0	22	1	22	2	22	4	22	6	22	7	22	8

Degrees.	South Latitude ♒.													
	0		1		2		3		4		5		6	
	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′
0	20	9	20	10	20	11	20	11	20	12	20	13	20	14
1	20	13	20	14	20	15	20	16	20	17	20	18	20	19
2	20	17	20	18	20	19	20	20	20	21	20	22	20	23
3	20	21	20	22	20	23	20	24	20	25	20	26	20	27
4	20	25	20	26	20	27	20	28	20	29	20	30	20	31
5	20	29	20	31	20	32	20	33	20	34	20	35	20	36
6	20	34	20	35	20	36	20	37	20	38	20	39	20	40
7	20	38	20	39	20	40	20	41	20	42	20	43	20	44
8	20	42	20	43	20	44	20	45	20	46	20	47	20	48
9	20	46	20	47	20	48	20	49	20	50	20	52	20	53
10	20	50	20	51	20	52	20	53	20	54	20	56	20	57
11	20	54	20	55	20	56	20	57	20	59	21	0	21	1
12	20	58	20	59	21	0	21	1	21	3	21	4	21	5
13	21	2	21	3	21	4	21	5	21	7	21	8	21	9
14	21	6	21	7	21	8	21	10	21	11	21	12	21	13
15	21	10	21	11	21	12	21	14	21	15	21	17	21	17
16	21	14	21	15	21	16	21	18	21	19	21	20	21	21
17	21	18	21	19	21	20	21	22	21	23	21	24	21	25
18	21	22	21	23	21	24	21	26	21	27	21	28	21	29
19	21	26	21	27	21	28	21	30	21	31	21	32	21	33
20	21	30	21	31	21	32	21	34	21	35	21	36	21	37
21	21	34	21	35	21	36	21	38	21	39	21	40	21	41
22	21	38	21	39	21	40	21	42	21	43	21	44	21	45
23	21	41	21	43	21	44	21	46	21	47	21	48	21	49
24	21	45	21	47	21	48	21	49	21	51	21	52	21	53
25	21	49	21	51	21	52	21	53	21	55	21	56	21	57
26	21	53	21	54	21	56	21	57	21	59	22	0	22	1
27	21	57	21	58	22	0	22	1	22	3	22	4	22	5
28	22	1	22	2	22	4	22	5	22	6	22	8	22	9
29	22	5	22	6	22	7	22	9	22	10	22	12	22	13
30	22	8	22	10	22	11	22	13	22	14	22	16	22	17

North Latitude ♓.

Degrees.	6		5		4		3		2		1		0	
	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′
0	22	0	22	1	22	3	22	4	22	6	22	7	22	8
1	22	4	22	5	22	7	22	8	22	9	22	11	22	12
2	22	8	22	9	22	10	22	12	22	13	22	14	22	16
3	22	12	22	13	22	14	22	15	22	17	22	18	22	20
4	22	15	22	16	22	18	22	19	22	21	22	22	22	24
5	22	19	22	20	22	21	22	23	22	24	22	26	22	28
6	22	23	22	24	22	25	22	27	22	28	22	30	22	31
7	22	26	22	27	22	29	22	30	22	32	22	33	22	35
8	22	30	22	31	22	33	22	34	22	36	22	37	22	39
9	22	34	22	35	22	36	22	38	22	39	22	41	22	42
10	22	38	22	39	22	40	22	42	22	43	22	45	22	46
11	22	41	22	42	22	44	22	45	22	47	22	49	22	50
12	22	45	22	46	22	48	22	49	22	51	22	52	22	54
13	22	49	22	50	22	51	22	53	22	54	22	56	22	57
14	22	52	22	53	22	55	22	56	22	58	23	0	23	1
15	22	56	22	57	22	59	23	0	23	2	23	3	23	5
16	23	0	23	1	23	2	23	4	23	5	23	7	23	8
17	23	3	23	4	23	6	23	7	23	9	23	11	23	12
18	23	7	23	8	23	10	23	11	23	13	23	14	23	16
19	23	11	23	12	23	13	23	15	23	16	23	18	23	20
20	23	15	23	16	23	17	23	19	23	20	23	22	23	23
21	23	18	23	19	23	21	23	22	23	24	23	25	23	27
22	23	22	23	23	23	24	23	26	23	27	23	29	23	31
23	23	25	23	26	23	28	23	29	23	31	23	33	23	34
24	23	29	23	30	23	31	23	33	23	35	23	36	23	38
25	23	33	23	34	23	35	23	37	23	39	23	40	23	42
26	23	36	23	37	23	39	23	41	23	42	23	44	23	46
27	23	40	23	41	23	43	23	44	23	46	23	47	23	49
28	23	44	23	45	23	46	23	48	23	49	23	51	23	53
29	23	47	23	49	23	50	23	52	23	53	23	55	23	56
30	23	50	23	52	23	54	23	55	23	57	20	58	24	0

Degrees.	South Latitude ♓.													
	0		1		2		3		4		5		6	
	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′
0	22	8	22	10	22	11	22	13	22	14	22	16	22	17
1	22	12	22	14	22	15	22	17	22	18	22	20	22	21
2	22	16	22	18	22	19	22	20	22	22	22	23	22	24
3	22	20	22	21	22	23	22	24	22	26	22	27	22	28
4	22	24	22	25	22	27	22	28	22	30	22	31	22	32
5	22	28	22	29	22	30	22	32	22	33	22	35	22	36
6	22	31	22	33	22	34	22	36	22	37	22	39	22	40
7	22	35	22	36	22	38	22	39	22	41	22	42	22	43
8	22	39	22	40	22	42	22	43	22	45	22	46	22	47
9	22	42	22	44	22	45	22	47	22	49	22	50	22	51
10	22	46	22	48	22	49	22	51	22	52	22	54	22	55
11	22	50	22	51	22	53	22	55	22	56	22	58	22	59
12	22	54	22	55	22	57	22	58	23	0	23	1	23	2
13	22	57	22	59	23	1	23	2	23	3	23	5	23	6
14	23	1	23	3	23	4	23	6	23	7	23	9	23	10
15	23	5	23	6	23	8	23	9	23	11	23	13	23	14
16	23	8	23	10	23	12	23	13	23	15	23	16	23	17
17	23	12	23	14	23	15	23	17	23	18	23	20	23	21
18	23	16	23	18	23	19	23	21	23	22	23	24	23	25
19	23	20	23	21	23	23	23	24	23	26	23	28	23	29
20	23	23	23	25	23	27	23	28	23	30	23	32	23	33
21	23	27	23	29	23	30	23	32	23	33	23	35	23	36
22	23	31	23	32	23	34	23	35	23	37	23	39	23	40
23	23	34	23	36	23	37	23	39	23	41	23	42	23	43
24	23	38	23	40	23	41	23	43	23	44	23	46	23	47
25	23	42	23	43	23	45	23	47	23	48	23	50	23	51
26	23	46	23	47	23	48	23	50	23	52	23	53	23	54
27	23	49	23	51	23	52	23	54	23	55	23	57	23	58
28	23	53	23	54	23	56	23	57	23	59	24	1	24	2
29	23	56	23	58	23	59	24	1	24	3	24	4	24	5
30	24	0	24	0	24	3	24	5	24	6	24	8	24	9

Degrees.	North Latitude ♈.													
	6		5		4		3		2		1		0	
	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′
0	23	23	23	29	23	35	23	41	23	48	23	54	0	0
1	23	25	23	31	23	37	23	42	23	49	23	55	0	2
2	23	26	23	32	23	39	23	44	23	51	23	57	0	3
3	23	28	23	34	23	40	23	46	23	52	23	59	0	5
4	23	30	23	35	23	42	23	47	23	54	0	0	0	7
5	23	31	23	37	23	43	23	49	23	56	0	2	0	8
6	23	33	23	38	23	45	23	51	23	57	0	3	0	10
7	23	34	23	40	23	47	23	53	23	59	0	5	0	11
8	23	36	23	41	23	48	23	54	0	1	0	7	0	13
9	23	37	23	43	23	50	23	56	0	2	0	8	0	15
10	23	38	23	45	23	51	23	57	0	3	0	10	0	17
11	23	40	23	46	23	53	23	59	0	5	0	12	0	18
12	23	41	23	48	23	55	0	1	0	7	0	13	0	20
13	23	43	23	49	23	56	0	2	0	9	0	15	0	22
14	23	44	23	51	23	58	0	4	0	11	0	17	0	23
15	23	46	23	53	23	59	0	6	0	12	0	19	0	25
16	23	47	23	54	0	1	0	8	0	14	0	20	0	27
17	23	49	23	55	0	3	0	9	0	16	0	22	0	28
18	23	51	23	57	0	5	0	10	0	17	0	24	0	30
19	23	53	23	59	0	6	0	12	0	19	0	25	0	32
20	23	54	0	1	0	8	0	14	0	21	0	27	0	34
21	23	55	0	3	0	10	0	16	0	23	0	29	0	35
22	23	57	0	5	0	11	0	18	0	24	0	31	0	37
23	23	59	0	7	0	13	0	20	0	26	0	33	0	39
24	0	1	0	9	0	15	0	21	0	28	0	35	0	41
25	0	2	0	11	0	16	0	23	0	30	0	36	0	43
26	0	4	0	12	0	18	0	25	0	31	0	38	0	45
27	0	6	0	14	0	20	0	27	0	33	0	40	0	46
28	0	8	0	15	0	22	0	29	0	35	0	42	0	48
29	0	9	0	17	0	24	0	30	0	37	0	43	0	50
30	0	11	0	18	0	25	0	32	0	39	0	45	0	52

Degrees.	South Latitude ♈.													
	0		1		2		3		4		5		6	
	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′
0	0	0	0	6	0	12	0	18	0	25	0	31	0	37
1	0	2	0	8	0	14	0	20	0	27	0	33	0	39
2	0	3	0	9	0	16	0	22	0	28	0	34	0	40
3	0	5	0	11	0	17	0	23	0	30	0	36	0	42
4	0	7	0	13	0	19	0	25	0	31	0	38	0	44
5	0	8	0	14	0	21	0	27	0	33	0	39	0	46
6	0	10	0	16	0	23	0	29	0	35	0	41	0	47
7	0	11	0	18	0	24	0	30	0	26	0	43	0	49
8	0	13	0	20	0	26	0	32	0	38	0	44	0	50
9	0	15	0	21	0	27	0	34	0	40	0	46	0	52
10	0	17	0	23	0	29	0	35	0	41	0	48	0	54
11	0	18	0	24	0	31	0	37	0	43	0	49	0	55
12	0	20	0	26	0	32	0	39	0	45	0	51	0	57
13	0	22	0	28	0	34	0	40	0	47	0	53	0	59
14	0	23	0	30	0	36	0	42	0	48	0	55	1	1
15	0	25	0	31	0	38	0	44	0	50	0	56	1	2
16	0	27	0	33	0	39	0	45	0	52	0	58	1	4
17	0	28	0	35	0	41	0	47	0	54	1	0	1	6
18	0	30	0	37	0	43	0	49	0	55	1	2	1	8
19	0	32	0	38	0	45	0	51	0	57	1	3	1	9
20	0	34	0	40	0	46	0	53	0	59	1	5	1	11
21	0	35	0	42	0	48	0	55	1	1	1	7	1	13
22	0	37	0	44	0	50	0	56	1	2	1	9	1	15
23	0	39	0	45	0	52	0	58	1	4	1	11	1	17
24	0	41	0	47	0	54	1	0	1	6	1	12	1	19
25	0	43	0	49	0	55	1	2	1	8	1	14	1	20
26	0	45	0	51	0	57	1	3	1	10	1	16	1	22
27	0	46	0	53	0	59	1	5	1	12	1	18	1	24
28	0	48	0	55	1	1	1	7	1	14	1	20	1	26
29	0	50	0	57	1	3	1	9	1	16	1	22	1	28
30	0	52	0	59	1	5	1	11	1	18	1	24	1	30

Degrees.	North Latitude ♉.													
	6		5		4		3		2		1		0	
	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′
0	0	11	0	18	0	25	0	32	0	39	0	46	0	52
1	0	13	0	20	0	27	0	34	0	41	0	47	0	54
2	0	15	0	22	0	29	0	36	0	43	0	49	0	56
3	0	17	0	24	0	31	0	38	0	45	0	51	0	58
4	0	18	0	26	0	33	0	40	0	46	0	53	1	0
5	0	20	0	27	0	35	0	42	0	48	0	55	1	2
6	0	22	0	29	0	36	0	44	0	49	0	57	1	4
7	0	24	0	31	0	38	0	45	0	52	0	59	1	6
8	0	26	0	33	0	40	0	47	0	54	1	1	1	8
9	0	28	0	35	0	42	0	50	0	56	1	3	1	10
10	0	29	0	37	0	44	0	52	0	58	1	5	1	12
11	0	31	0	39	0	46	0	54	1	1	1	7	1	14
12	0	33	0	41	0	48	0	56	1	3	1	9	1	16
13	0	35	0	43	0	50	0	58	1	5	1	12	1	19
14	0	37	0	45	0	52	1	0	1	7	1	14	1	21
15	0	39	0	47	0	55	1	2	1	9	1	16	1	23
16	0	41	0	49	0	57	1	4	1	11	1	19	1	25
17	0	43	0	51	0	59	1	6	1	13	1	21	1	28
18	0	45	0	53	1	1	1	9	1	16	1	23	1	30
19	0	47	0	55	1	3	1	11	1	18	1	25	1	32
20	0	49	0	58	1	5	1	13	1	20	1	28	1	35
21	0	52	1	0	1	8	1	16	1	22	1	30	1	37
22	0	54	1	2	1	10	1	18	1	25	1	32	1	40
23	0	56	1	4	1	12	1	20	1	27	1	35	1	42
24	0	58	1	7	1	15	1	23	1	30	1	37	1	45
25	1	1	1	9	1	17	1	25	1	32	1	40	1	47
26	1	3	1	12	1	20	1	28	1	35	1	43	1	50
27	1	6	1	14	1	22	1	30	1	38	1	45	1	52
28	1	8	1	17	1	25	1	33	1	40	1	48	1	55
29	1	11	1	19	1	27	1	35	1	43	1	51	1	58
30	1	13	1	22	1	30	1	38	1	46	1	53	2	1

Degrees	South Latitude ♉.													
	0		1		2		3		4		5		6	
	h.	'	h.	'	h.	'	h.	'	h.	'	h.	'	h.	'
0	0	52	0	59	1	5	1	11	1	18	1	24	1	30
1	0	54	1	1	1	7	1	13	1	20	1	26	1	32
2	0	56	1	3	1	9	1	15	1	22	1	28	1	34
3	0	58	1	5	1	11	1	17	1	24	1	30	1	36
4	1	0	1	7	1	13	1	19	1	26	1	32	1	38
5	1	2	1	9	1	15	1	21	1	28	1	34	1	40
6	1	4	1	10	1	17	1	23	1	30	1	36	1	42
7	1	6	1	12	1	19	1	26	1	32	1	38	1	45
8	1	8	1	15	1	21	1	28	1	34	1	40	1	47
9	1	10	1	17	1	23	1	30	1	36	1	43	1	49
10	1	12	1	19	1	25	1	32	1	39	1	45	1	51
11	1	14	1	21	1	28	1	34	1	41	1	47	1	53
12	1	16	1	23	1	30	1	36	1	43	1	49	1	56
13	1	19	1	25	1	32	1	39	1	45	1	52	1	58
14	1	21	1	28	1	34	1	41	1	48	1	54	2	0
15	1	23	1	30	1	37	1	43	1	50	1	56	2	2
16	1	25	1	32	1	39	1	46	1	52	1	59	2	5
17	1	28	1	35	1	41	1	48	1	54	2	1	2	7
18	1	30	1	37	1	44	1	50	1	57	2	3	2	10
19	1	32	1	39	1	46	1	53	1	59	2	6	2	12
20	1	35	1	41	1	48	1	55	2	2	2	8	2	15
21	1	37	1	44	1	51	1	58	2	4	2	11	2	17
22	1	40	1	46	1	53	2	0	2	7	2	13	2	20
23	1	42	1	49	1	56	2	3	2	9	2	16	2	22
24	1	45	1	52	1	58	2	5	2	12	2	18	2	25
25	1	47	1	54	2	1	2	8	2	14	2	21	2	27
26	1	50	1	57	2	4	2	10	2	17	2	24	2	30
27	1	52	2	0	2	6	2	13	2	20	2	26	2	33
28	1	55	2	2	2	9	2	16	2	23	2	29	2	36
29	1	58	2	5	2	12	2	19	1	26	2	32	2	39
30	2	1	2	8	2	15	2	22	2	28	2	35	2	41

Degrees.	North Latitude ♊.													
	6		5		4		3		2		1		0	
	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′
0	1	13	1	21	1	30	1	38	1	46	1	53	2	1
1	1	16	1	24	1	33	1	41	1	48	1	56	2	3
2	1	18	1	27	1	36	1	44	1	51	1	59	2	6
3	1	21	1	30	1	38	1	46	1	54	2	2	2	9
4	1	24	1	33	1	41	1	49	1	57	2	5	2	12
5	1	27	1	36	1	44	1	52	2	0	2	8	2	15
6	1	30	1	39	1	47	1	55	2	3	2	11	2	18
7	1	32	1	41	1	50	1	58	2	6	2	14	2	21
8	1	35	1	44	1	53	2	1	2	9	2	17	2	24
9	1	38	1	47	1	56	2	4	2	12	2	20	2	27
10	1	41	1	51	1	59	2	8	2	16	2	23	2	31
11	1	45	1	54	2	3	2	11	2	19	2	27	2	34
12	1	48	1	57	2	6	2	14	2	22	2	30	2	38
13	1	51	2	0	2	9	2	18	2	26	2	33	2	41
14	1	54	2	4	2	12	2	21	2	29	2	37	2	44
15	1	58	2	7	2	16	2	25	2	32	2	40	2	48
16	2	1	2	11	2	20	2	28	2	36	2	44	2	51
17	2	5	2	14	2	23	2	32	2	40	2	48	2	55
18	2	9	2	18	2	27	2	36	2	43	2	51	2	59
19	2	12	2	22	2	31	2	39	2	47	2	55	3	2
20	2	16	2	26	2	34	2	43	2	51	2	59	3	6
21	2	20	2	29	2	38	2	47	2	55	3	3	3	10
22	2	24	2	33	2	42	2	50	2	58	3	6	3	14
23	2	28	2	37	2	46	2	54	3	3	3	10	3	18
24	2	32	2	41	2	50	2	58	3	7	3	15	3	22
25	2	36	2	45	2	54	3	3	3	11	3	18	3	26
26	2	40	2	50	2	58	3	7	3	15	3	22	3	30
27	2	44	2	54	3	3	3	11	3	19	3	27	3	34
28	2	49	2	58	3	7	3	15	3	23	3	31	3	38
29	2	53	3	3	3	11	3	20	3	28	3	35	3	43
30	2	58	3	7	3	16	3	24	3	32	3	40	3	47

Degrees.	South Latitude II.													
	0		1		2		3		4		5		6	
	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′
0	2	1	2	8	2	15	2	22	2	28	2	35	2	41
1	2	3	2	11	2	18	2	24	2	31	2	38	2	44
2	2	6	2	13	2	20	2	27	2	34	2	41	2	47
3	2	9	2	16	2	23	2	30	2	37	2	43	2	50
4	2	12	2	19	2	26	2	33	2	40	2	47	2	53
5	2	15	2	22	2	29	2	36	2	43	2	50	2	56
6	2	18	2	25	2	32	2	39	2	46	2	53	2	59
7	2	21	2	28	2	36	2	42	2	49	2	56	3	2
8	2	24	2	31	2	39	2	46	2	52	2	59	3	5
9	2	27	2	35	2	42	2	49	2	55	3	2	3	9
10	2	31	2	38	2	45	2	52	2	59	3	5	3	12
11	2	34	2	41	2	48	2	55	3	2	3	9	3	15
12	2	38	2	44	2	52	2	59	3	6	3	12	3	19
13	2	41	2	48	2	55	3	2	3	9	3	15	3	22
14	2	44	2	51	2	59	3	6	3	12	3	19	3	26
15	2	48	2	55	3	2	3	9	3	16	3	22	3	29
16	2	51	2	59	3	6	3	13	3	19	3	26	3	32
17	3	55	2	2	3	10	3	16	3	23	3	30	3	36
18	3	59	2	6	3	13	3	20	3	27	3	33	3	39
19	3	2	3	10	3	17	3	24	3	30	3	37	3	43
20	3	6	3	14	3	20	3	27	3	34	3	40	3	47
21	3	10	3	17	3	24	3	31	3	38	3	44	3	51
22	3	14	3	21	3	28	3	35	3	42	3	48	3	54
23	3	18	3	25	3	32	3	39	3	46	3	52	3	58
24	3	22	3	29	3	36	3	43	3	49	3	56	4	2
25	3	26	3	33	3	40	3	47	3	53	4	0	4	6
26	3	30	3	37	3	44	3	51	3	57	4	4	4	10
27	3	34	3	41	3	48	3	55	4	1	4	8	4	14
28	3	38	3	45	3	52	3	59	4	6	4	12	4	18
29	3	43	3	50	3	56	4	3	4	10	4	16	4	22
30	3	47	3	54	4	1	4	7	4	14	4	20	4	26

Degrees.	North Latitude ♋.													
	6		5		4		3		2		1		0	
	h.	′	h.	′	h	′	h.	′	h.	′	h.	′	h.	′
0	2	58	3	7	3	16	3	24	3	32	3	40	3	47
1	3	2	3	12	3	20	3	29	3	37	3	44	3	51
2	3	7	3	16	3	25	3	33	3	41	3	49	3	56
3	3	12	3	21	3	30	3	38	3	46	3	53	4	0
4	3	17	3	26	3	35	3	43	3	50	3	58	4	5
5	3	22	3	31	3	39	3	47	3	55	4	2	4	10
6	3	27	3	36	3	44	3	52	4	0	4	7	4	14
7	3	32	3	41	3	49	3	57	4	5	4	12	4	19
8	3	37	3	46	3	54	4	2	4	9	4	17	4	24
9	3	42	3	51	3	59	4	7	4	14	4	22	4	28
10	3	47	3	56	4	4	4	12	4	19	4	26	4	33
11	3	53	4	1	4	9	4	17	4	24	4	31	4	38
12	3	58	4	6	4	14	4	22	4	29	4	36	4	43
13	4	3	4	12	4	20	4	27	4	35	4	41	4	48
14	4	9	4	17	4	25	4	32	4	40	4	47	4	53
15	4	14	4	23	4	30	4	38	4	45	4	52	4	58
16	4	20	4	28	4	36	4	43	4	50	4	57	5	3
17	4	26	4	34	4	41	4	48	4	55	5	2	5	8
18	4	31	4	39	4	47	4	54	5	1	5	7	5	14
19	4	37	4	45	4	52	4	59	5	6	5	12	5	19
20	4	43	4	50	4	58	5	5	5	11	5	18	5	24
21	4	49	4	56	5	3	5	10	5	17	5	23	5	29
22	4	54	5	2	5	9	5	19	5	22	5	28	5	35
23	5	0	5	8	5	15	5	21	5	28	5	34	5	40
24	5	6	5	14	5	20	5	27	5	33	5	39	5	45
25	5	12	5	20	5	26	5	33	5	39	5	45	5	51
26	5	18	5	25	5	32	5	38	5	44	5	51	5	56
27	5	24	5	31	5	38	5	44	5	50	5	56	6	2
28	5	30	5	37	5	43	5	50	5	56	6	2	6	7
29	5	36	5	43	5	49	5	56	6	1	6	7	6	13
30	5	42	5	49	5	55	6	1	6	7	6	13	6	18

Degrees.	South Latitude ♋.													
	0		1		2		3		4		5		6	
	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′
0	3	47	3	54	4	1	4	8	4	14	4	20	4	26
1	3	51	3	58	4	5	4	12	4	18	4	24	4	31
2	3	56	4	3	4	10	4	16	4	23	4	29	4	35
3	4	0	4	7	4	14	4	21	4	27	4	33	4	39
4	4	5	4	12	4	19	4	25	4	31	4	37	4	43
5	4	10	4	16	4	23	4	29	4	36	4	42	4	48
6	4	14	4	21	4	28	4	34	4	40	4	46	4	52
7	4	19	4	26	4	32	4	39	4	45	4	51	4	57
8	4	24	4	30	4	37	4	43	4	49	4	55	5	1
9	4	28	4	35	4	42	4	48	4	55	5	0	5	6
10	4	33	4	40	4	46	4	52	4	58	5	4	5	10
11	4	38	4	45	4	51	4	57	5	3	5	9	5	15
12	4	43	4	50	4	56	5	2	5	8	5	14	5	19
13	4	48	4	55	5	1	5	7	5	13	5	18	5	24
14	4	53	4	59	5	6	5	12	5	18	5	23	5	29
15	4	58	5	4	5	11	5	16	5	22	5	28	5	34
16	5	3	5	9	5	16	5	21	5	27	5	33	5	38
17	5	8	5	14	5	21	5	26	5	32	5	38	5	43
18	5	14	5	20	5	26	5	31	5	37	5	43	5	48
19	5	19	5	25	5	31	5	36	5	42	5	48	5	53
20	5	24	5	30	5	36	5	41	5	47	5	52	5	58
21	5	29	5	35	5	41	5	47	5	52	5	56	6	3
22	5	35	5	40	5	46	5	52	5	57	6	2	6	8
23	5	40	5	46	5	52	5	57	6	2	6	7	6	13
24	5	45	5	51	5	57	6	7	6	7	6	13	6	18
25	5	51	5	56	6	2	6	2	6	13	6	18	6	23
26	5	56	6	2	6	7	6	13	6	18	6	23	6	28
27	6	2	6	7	6	13	6	18	6	23	6	28	6	33
28	6	7	6	13	6	18	6	23	6	28	6	33	6	38
29	6	13	6	18	6	23	6	28	6	34	6	38	6	43
30	6	18	6	24	6	29	6	34	6	39	6	44	6	48

Degrees.	North Latitude ♌.													
	6		5		4		3		2		1		0	
	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′
0	5	42	5	49	5	55	6	1	6	7	6	13	6	18
1	5	48	5	55	6	1	6	7	6	13	6	18	6	24
2	5	55	6	1	6	7	6	13	6	18	6	24	6	29
3	6	1	6	7	6	13	6	19	6	24	6	30	6	35
4	6	7	6	13	6	19	6	24	6	30	6	35	6	41
5	6	13	6	19	6	25	6	30	6	36	6	41	6	46
6	6	19	6	25	6	31	6	36	6	42	6	47	6	52
7	6	25	6	31	6	36	6	42	6	47	6	52	6	57
8	6	31	6	37	6	43	6	48	6	53	6	58	7	3
9	6	37	6	43	6	48	6	54	6	59	7	4	7	9
10	6	43	6	49	6	54	7	0	7	5	7	9	7	14
11	6	50	6	55	7	0	7	6	7	11	7	15	7	20
12	6	56	7	1	7	6	7	11	7	16	7	21	7	26
13	7	2	7	7	7	12	7	17	7	22	7	27	7	32
14	7	8	7	13	7	18	7	23	7	28	7	33	7	37
15	7	14	7	19	7	24	7	29	7	34	7	38	7	43
16	7	20	7	25	7	30	7	35	7	40	7	44	7	49
17	7	27	7	32	7	36	7	41	7	46	7	50	7	54
18	7	33	7	38	7	42	7	47	7	51	7	56	8	0
19	7	39	7	44	7	48	7	53	7	57	8	2	8	6
20	7	45	7	50	7	54	7	59	8	3	8	7	8	12
21	7	51	7	56	8	0	8	5	8	9	8	13	8	17
22	7	57	8	2	8	6	8	11	8	15	8	19	8	23
23	8	3	8	8	8	12	8	17	8	21	8	25	8	29
24	8	10	8	14	8	18	8	22	8	27	8	31	8	34
25	8	16	8	20	8	24	8	28	8	32	8	36	8	40
26	8	22	8	26	8	30	8	34	8	38	8	42	8	46
27	8	28	8	32	8	36	8	40	8	44	8	48	8	52
28	8	34	8	38	8	42	8	46	8	50	8	54	8	58
29	8	40	8	44	8	48	8	52	8	56	9	0	9	3
30	8	46	8	50	8	54	8	58	9	2	9	5	9	9

Degrees.	South Latitude ♌.													
	0		1		2		3		4		5		6	
	h.	'	h.	'	h.	'	h.	'	h.	'	h.	'	h.	'
0	6	18	6	24	6	29	6	34	6	39	6	44	6	48
1	6	24	6	29	6	34	6	39	6	44	6	49	6	53
2	6	29	6	35	6	40	6	44	6	49	6	54	6	59
3	6	35	6	40	6	45	6	50	6	55	6	59	7	4
4	6	41	6	46	6	51	6	55	7	0	7	5	7	9
5	6	46	6	51	6	56	7	1	7	5	7	10	7	14
6	6	52	6	57	7	1	7	6	7	11	7	15	7	20
7	6	57	7	2	7	7	7	12	7	16	7	21	7	25
8	7	3	7	8	7	12	7	17	7	21	7	26	7	30
9	7	9	7	13	7	18	7	23	7	27	7	31	7	36
10	7	14	7	19	7	24	7	28	7	32	7	37	7	41
11	7	20	7	25	7	29	7	34	7	38	7	42	7	46
12	7	26	7	30	7	35	7	39	7	43	7	48	7	52
13	7	32	7	36	7	40	7	45	7	49	7	53	7	57
14	7	37	7	42	7	46	7	50	7	54	7	59	8	3
15	7	43	7	47	7	52	7	56	8	0	8	4	8	8
16	7	49	7	53	7	57	8	1	8	5	8	9	8	13
17	7	54	7	59	8	3	8	7	8	11	8	15	8	19
18	8	0	8	4	8	8	8	12	8	16	8	20	8	24
19	8	6	8	10	8	14	8	18	8	22	8	26	8	30
20	8	12	8	15	8	20	8	24	8	28	8	31	8	35
21	8	17	8	21	8	25	8	29	8	33	8	37	8	41
22	8	23	8	27	8	31	8	35	8	39	8	42	8	46
23	8	29	8	32	8	36	8	40	8	44	8	48	8	52
24	8	34	8	38	8	42	8	46	8	50	8	53	8	57
25	8	40	8	44	8	48	8	52	8	55	8	59	9	2
26	8	46	8	50	8	54	8	57	9	1	9	5	9	8
27	8	52	8	56	9	0	9	3	9	6	9	10	9	13
28	8	58	9	1	9	5	9	8	9	12	9	15	9	19
29	9	3	9	7	9	10	9	14	9	17	9	21	9	24
30	9	9	9	12	9	16	9	20	9	23	9	27	9	30

Degrees.	North Latitude ♍.													
	6		5		4		3		2		1		0	
	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′
0	8	46	8	50	8	54	8	58	9	2	9	5	9	9
1	8	52	8	56	9	0	9	4	9	7	9	11	9	15
2	8	58	9	2	9	6	9	9	9	13	9	17	9	20
3	9	4	9	8	9	12	9	15	9	19	9	23	9	26
4	9	10	9	14	9	18	9	21	9	25	9	28	9	32
5	9	16	9	20	9	23	9	27	9	31	9	34	9	38
6	9	22	9	26	9	29	9	33	9	36	9	40	9	43
7	9	28	9	32	9	35	9	39	9	42	9	46	9	49
8	9	34	9	38	9	41	9	44	9	48	9	51	9	55
9	9	40	9	43	9	47	9	50	9	54	9	57	10	0
10	9	46	9	49	9	53	9	56	10	0	10	3	10	6
11	9	52	9	55	9	58	10	2	10	5	10	9	10	12
12	9	57	10	1	10	4	10	8	10	11	10	14	10	18
13	10	3	10	7	10	10	10	13	10	17	10	20	10	23
14	10	9	10	12	10	16	10	19	10	23	10	26	10	29
15	10	15	10	18	10	22	10	25	10	28	10	32	10	35
16	10	21	10	24	10	28	10	31	10	34	10	37	10	40
17	10	27	10	30	10	33	10	36	10	40	10	43	10	46
18	10	32	10	36	10	39	10	42	10	46	10	48	10	52
19	10	38	10	42	10	45	10	48	10	51	10	54	10	58
20	10	44	10	47	10	51	10	54	10	57	11	0	11	3
21	10	50	10	53	10	56	11	0	11	3	11	6	11	9
22	10	56	10	59	11	2	11	5	11	8	11	11	11	14
23	11	2	11	5	11	8	11	11	11	14	11	17	11	20
24	11	7	11	11	11	14	11	17	11	20	11	23	11	26
25	11	13	11	16	11	19	11	22	11	25	11	28	11	32
26	11	19	11	22	11	25	11	28	11	31	11	34	11	37
27	11	24	11	28	11	31	11	34	11	37	11	40	11	43
28	11	30	11	33	11	36	11	40	11	43	11	45	11	49
29	11	36	11	39	11	42	11	45	11	48	11	51	11	54
30	11	42	11	44	11	48	11	51	11	54	11	57	12	0

Degrees.	South Latitude ♍.													
	0		1		2		3		4		5		6	
	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′
0	9	9	9	12	9	16	9	20	9	23	9	27	9	30
1	9	15	9	18	9	22	9	25	9	29	9	32	9	36
2	9	20	9	24	9	27	9	31	9	34	9	38	9	41
3	9	26	9	30	9	33	9	36	9	40	9	43	9	47
4	9	32	9	35	9	39	9	42	9	45	9	49	9	52
5	9	38	9	41	9	44	9	48	9	51	9	54	9	58
6	9	43	9	47	9	50	9	53	9	57	10	0	10	3
7	9	49	9	52	9	56	9	59	10	2	10	6	10	9
8	9	55	9	58	10	1	10	4	10	8	10	11	10	14
9	10	0	10	4	10	7	10	10	10	14	10	17	10	20
10	10	6	10	9	10	13	10	16	10	19	10	22	10	26
11	10	12	10	15	10	18	10	22	10	25	10	28	10	31
12	10	18	10	21	10	24	10	27	10	30	10	34	10	37
13	10	23	10	26	10	30	10	33	10	36	10	39	10	42
14	10	29	10	32	10	35	10	39	10	42	10	45	10	48
15	10	35	10	38	10	41	10	44	10	47	10	50	10	54
16	10	40	10	44	10	47	10	50	10	53	10	56	10	59
17	10	46	10	49	10	52	10	55	10	58	11	2	11	5
18	10	52	10	55	10	58	11	1	11	4	11	7	11	10
19	10	58	11	1	11	4	11	7	11	10	11	13	11	16
20	11	3	11	6	11	9	11	12	11	15	11	18	11	22
21	11	9	11	12	11	15	11	18	11	21	11	24	11	27
22	11	14	11	18	11	21	11	24	11	27	11	30	11	33
23	11	20	11	23	11	26	11	29	11	32	11	35	11	38
24	11	26	11	29	11	32	11	35	11	38	11	41	11	44
25	11	32	11	35	11	38	11	41	11	44	11	47	11	50
26	11	37	11	40	11	43	11	46	11	49	11	52	11	56
27	11	43	11	46	11	49	11	52	11	55	11	58	12	1
28	11	49	11	52	11	55	11	58	12	1	12	4	12	7
29	11	56	11	57	12	0	12	3	12	6	12	10	12	13
30	12	0	12	3	12	6	12	9	12	12	12	15	12	18

Degrees.	North Latitude ♎.													
	6		5		4		3		2		1		0	
	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′
0	11	42	11	44	11	48	11	51	11	54	11	57	12	0
1	11	47	11	50	11	54	11	56	12	0	12	3	12	6
2	11	53	11	56	11	59	12	2	12	5	12	8	12	11
3	11	59	12	2	12	5	12	8	12	11	12	14	12	17
4	12	4	12	7	12	10	12	14	12	16	12	20	12	23
5	12	10	12	13	12	16	12	19	12	22	12	25	12	28
6	12	16	12	19	12	22	12	25	12	28	12	31	12	34
7	12	22	12	24	12	28	12	30	12	34	12	37	12	40
8	12	27	12	30	12	33	12	36	12	39	12	42	12	45
9	12	33	12	36	12	39	12	42	12	45	12	48	12	51
10	12	38	12	41	12	44	12	48	12	50	12	54	12	57
11	12	44	12	47	12	50	12	53	12	56	12	59	13	2
12	12	50	12	53	12	56	12	59	13	2	13	5	13	8
13	12	55	12	58	13	1	13	4	13	8	13	11	13	14
14	13	1	13	4	13	7	13	10	13	13	13	16	13	20
15	13	6	13	9	13	13	13	16	13	19	13	22	13	25
16	13	12	13	15	13	18	13	21	13	24	13	28	13	31
17	13	18	13	21	13	24	13	27	13	30	13	33	13	37
18	13	23	13	26	13	30	13	33	13	36	13	39	13	42
19	13	29	13	32	13	35	13	38	13	42	13	45	13	48
20	13	34	13	38	13	41	13	44	13	47	13	50	13	54
21	13	40	13	43	13	46	13	50	13	53	13	56	13	59
22	13	45	13	49	13	52	13	55	13	58	14	2	14	5
23	13	51	13	54	13	58	14	1	14	4	14	8	14	11
24	13	57	14	0	14	3	14	6	14	10	14	13	14	16
25	14	2	14	6	14	9	14	12	14	16	14	19	14	22
26	14	8	14	11	14	14	14	18	14	21	14	25	14	28
27	14	13	14	17	14	20	14	23	14	27	14	30	14	34
28	14	19	14	22	14	26	14	29	14	32	14	36	14	40
29	14	24	14	28	14	31	14	35	14	38	14	42	14	45
30	14	30	14	33	14	37	14	40	14	44	14	48	14	51

South Latitude ♎.

Degrees.	0		1		2		3		4		5		6	
	h.	'	h.	'	h.	'	h.	'	h.	'	h.	'	h.	'
0	12	0	12	3	12	6	12	9	12	12	12	15	12	18
1	12	6	12	9	12	12	12	15	12	18	12	21	12	24
2	12	11	12	14	12	18	12	20	12	24	12	27	12	30
3	12	17	12	20	12	23	12	26	12	29	12	32	12	36
4	12	23	12	26	12	29	12	32	12	35	12	38	12	41
5	12	28	12	32	12	34	12	38	12	41	12	44	12	47
6	12	34	12	37	12	40	12	43	12	46	12	49	12	53
7	12	40	12	43	12	46	12	49	12	52	12	55	12	58
8	12	45	12	48	12	52	12	55	12	58	13	1	13	4
9	12	51	12	54	12	57	13	0	13	4	13	7	13	10
10	12	57	13	0	13	3	13	6	13	9	13	12	13	16
11	13	2	13	6	13	9	13	12	13	15	13	18	13	22
12	13	8	13	12	13	14	13	18	13	21	13	24	13	26
13	13	14	13	17	13	20	13	24	13	27	13	30	13	33
14	13	20	13	23	13	26	13	29	13	32	13	36	13	39
15	13	25	13	28	13	32	13	35	13	38	13	42	13	45
16	13	31	13	34	13	37	13	41	13	44	13	47	13	51
17	13	37	13	40	13	43	13	46	13	50	13	53	13	56
18	13	42	13	46	13	49	13	52	13	56	13	59	14	2
19	13	48	13	51	13	55	13	58	14	1	14	5	14	8
20	13	54	13	57	14	0	14	4	14	7	14	11	14	14
21	13	59	14	3	14	6	14	9	14	13	14	16	14	20
22	14	5	14	9	14	12	14	15	14	19	14	22	14	26
23	14	11	14	14	14	18	14	21	14	25	14	28	14	32
24	14	16	14	20	14	24	14	27	14	31	14	34	14	38
25	14	22	14	26	14	29	14	33	14	36	14	40	14	44
26	14	28	14	32	14	35	14	39	14	42	14	46	14	50
27	14	34	14	37	14	41	14	45	14	48	14	52	14	56
28	14	40	14	43	14	47	14	50	14	54	14	58	15	2
29	14	45	14	49	14	52	14	56	15	0	15	4	15	8
30	14	51	14	55	14	58	15	2	15	6	15	10	15	14

North Latitude ♏.

Degrees.	6		5		4		3		2		1		0	
	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′
0	14	30	14	33	14	37	14	40	14	44	14	48	14	51
1	14	35	14	39	14	42	14	46	14	50	14	53	14	57
2	14	41	14	44	14	48	14	52	14	55	14	59	15	2
3	14	46	14	50	14	54	14	57	15	1	15	4	15	8
4	14	52	14	55	14	59	15	3	15	6	15	10	15	14
5	14	57	15	1	15	5	15	8	15	12	15	16	15	19
6	15	3	15	7	15	10	15	14	15	18	15	22	15	25
7	15	8	15	12	15	16	15	19	15	23	15	27	15	31
8	15	14	15	18	15	21	15	25	15	29	15	33	15	37
9	15	19	15	23	15	27	15	31	15	35	15	39	15	43
10	15	25	15	29	15	32	15	36	15	40	15	44	15	48
11	15	30	15	34	15	38	15	42	15	46	15	50	15	55
12	15	36	15	40	15	44	15	48	15	52	15	56	16	0
13	15	41	15	45	15	49	15	53	15	57	16	1	16	6
14	15	47	15	51	15	55	15	59	16	3	16	7	16	11
15	15	52	15	56	16	0	16	4	16	8	16	13	16	17
16	15	57	16	1	16	6	16	10	16	14	16	18	16	23
17	16	3	16	7	16	11	16	15	16	19	16	24	16	28
18	16	8	16	12	16	16	16	21	16	25	16	30	16	34
19	16	14	16	18	16	22	16	26	16	31	16	35	16	40
20	16	19	16	23	16	27	16	32	16	36	16	41	16	46
21	16	24	16	28	16	33	16	37	16	42	16	46	16	51
22	16	30	16	34	16	38	16	43	16	47	16	52	16	57
23	16	35	16	39	16	44	16	48	16	53	16	58	17	3
24	16	40	16	44	16	49	16	54	16	58	17	3	17	8
25	16	46	16	50	16	55	16	59	17	4	17	9	17	14
26	16	51	16	55	17	0	17	5	17	9	17	14	17	19
27	16	56	17	1	17	5	17	10	17	15	17	20	17	25
28	17	1	17	6	17	10	17	15	17	20	17	25	17	31
29	17	7	17	11	17	16	17	21	17	26	17	31	17	36
30	17	12	17	16	17	21	17	26	17	31	17	36	17	42

South Latitude ♏.

Degrees.	0 h.	′	1 h	′	2 h.	′	3 h.	′	4 h.	′	5 h.	′	6 h.	′
0	14	51	14	55	14	58	15	2	15	6	15	10	15	14
1	14	57	15	0	15	4	15	8	15	12	15	16	15	20
2	15	2	15	6	15	10	15	14	15	18	15	22	15	26
3	15	8	15	12	15	16	15	20	15	24	15	28	15	32
4	15	14	15	18	15	22	15	26	15	30	15	34	15	38
5	15	19	15	24	15	28	15	32	15	36	15	40	15	44
6	15	25	15	29	15	33	15	38	15	42	15	46	15	50
7	15	31	15	35	15	39	15	43	15	48	15	52	15	56
8	15	37	15	41	15	45	15	49	15	54	15	58	16	3
9	15	43	15	46	15	51	15	55	16	0	16	4	16	9
10	15	48	15	52	15	57	16	1	16	6	16	10	16	15
11	15	55	15	58	16	3	16	7	16	12	16	16	16	21
12	16	0	16	4	16	8	16	13	16	18	16	22	16	27
13	16	6	16	10	16	14	16	19	16	24	16	28	16	33
14	16	11	16	16	16	20	16	25	16	30	16	34	16	40
15	16	17	16	22	16	26	16	31	16	36	16	40	16	46
16	16	23	16	27	16	32	16	37	16	42	16	47	16	52
17	16	28	16	33	16	38	16	43	16	48	16	53	16	58
18	16	34	16	39	16	44	16	48	16	54	16	59	17	4
19	16	40	16	44	16	49	16	54	16	59	17	5	17	10
20	16	46	16	50	16	55	17	0	17	5	17	11	17	16
21	16	51	16	56	17	1	17	6	17	11	17	17	17	25
22	16	57	17	2	17	7	17	12	17	17	17	23	17	29
23	17	3	17	8	17	13	17	18	17	23	17	29	17	35
24	17	8	17	13	17	18	17	24	17	29	17	35	17	41
25	17	14	17	19	17	24	17	30	17	35	17	41	17	47
26	17	19	17	24	17	30	17	36	17	41	17	47	17	53
27	17	25	17	30	17	36	17	41	17	47	17	53	17	59
28	17	31	17	36	17	42	17	47	17	53	17	59	18	5
29	17	36	17	42	17	47	17	53	17	59	18	5	18	12
30	17	42	17	47	17	53	17	59	18	5	18	11	18	18

North Latitude ♐.

Degrees.	6		5		4		3		2		1		0	
	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′
0	17	12	17	16	17	21	17	26	17	31	17	36	17	42
1	17	17	17	22	17	26	17	31	17	36	17	42	17	47
2	17	22	17	27	17	32	17	37	17	42	17	47	17	53
3	17	27	17	32	17	37	17	42	17	47	17	53	17	58
4	17	32	17	37	17	42	17	47	17	52	17	58	18	4
5	17	37	17	42	17	47	17	52	17	58	18	3	18	9
6	17	42	17	47	17	52	17	58	18	3	18	9	18	14
7	17	47	17	52	17	58	18	3	18	9	18	14	18	20
8	17	52	17	58	18	3	18	8	18	14	18	19	18	25
9	17	57	18	3	18	8	18	13	18	19	18	25	18	31
10	18	2	18	8	18	13	18	18	18	24	18	30	18	36
11	18	7	18	12	18	18	18	23	18	29	18	35	18	41
12	18	12	18	17	18	23	18	29	18	34	18	40	18	46
13	18	17	18	22	18	28	18	33	18	39	18	45	18	51
14	18	22	18	27	18	33	18	38	18	44	18	50	18	57
15	18	26	18	32	18	38	18	43	18	49	18	56	19	2
16	18	31	18	37	18	42	18	48	18	54	19	0	19	7
17	18	36	18	41	18	47	18	53	18	59	19	5	19	12
18	18	40	18	46	18	52	18	58	19	4	19	10	19	17
19	18	45	18	51	18	57	19	3	19	9	19	15	19	22
20	18	50	18	56	19	1	19	8	19	14	19	20	19	26
21	18	54	19	0	19	6	19	12	19	18	19	25	19	31
22	18	59	19	5	19	11	19	17	19	23	19	30	19	36
23	19	3	19	9	19	15	19	21	19	28	19	35	19	41
24	19	8	19	14	19	20	19	26	19	32	19	39	19	46
25	19	12	19	18	19	24	19	31	19	37	19	43	19	50
26	19	16	19	23	19	28	19	35	19	41	19	48	19	56
27	19	21	19	27	19	33	19	39	19	46	19	53	20	0
28	19	25	19	31	19	37	19	44	19	50	19	57	20	4
29	19	29	19	36	19	42	19	48	19	55	20	2	20	9
30	19	34	19	40	19	46	19	52	19	59	20	6	20	13

South Latitude ♐.

Degrees.	0		1		2		3		4		5		6	
	h.	'	h.	'	h.	'	h.	'	h.	'	h.	'	h.	'
0	17	42	17	47	17	53	17	59	18	5	18	11	18	18
1	17	47	17	53	17	59	18	5	18	11	18	17	18	24
2	17	53	17	58	18	4	18	10	18	17	18	23	18	30
3	17	58	18	4	18	10	18	16	18	22	18	29	18	36
4	18	4	18	10	18	15	18	21	18	28	18	35	18	42
5	18	9	18	15	18	21	18	27	18	34	18	41	18	48
6	18	14	18	20	18	27	18	33	18	40	18	47	18	54
7	18	20	18	26	18	32	18	39	18	45	18	52	19	0
8	18	25	18	31	18	38	18	44	18	51	18	58	19	6
9	18	31	18	37	18	43	18	50	18	57	19	4	19	11
10	18	36	18	42	18	49	18	55	19	2	19	10	19	17
11	18	41	18	48	18	54	19	1	19	8	19	15	19	23
12	18	46	18	53	18	59	19	6	19	13	19	21	19	29
13	18	51	18	58	19	5	19	12	19	19	19	26	19	34
14	18	57	19	3	19	10	19	17	19	24	19	32	19	40
15	19	2	19	8	19	15	19	22	19	30	19	37	19	46
16	19	7	19	13	19	20	19	27	19	35	19	43	19	51
17	19	12	19	19	19	25	19	33	19	40	19	48	19	56
18	19	17	19	24	19	31	19	38	19	46	19	54	20	2
19	19	22	19	29	19	36	19	43	19	51	19	59	20	7
20	19	26	19	34	19	41	19	48	19	56	20	4	20	13
21	19	31	19	39	19	46	19	53	20	1	20	9	20	18
22	19	36	19	43	19	51	19	58	20	6	20	14	20	23
23	19	41	19	48	19	56	20	3	20	11	20	19	20	28
24	19	46	19	53	20	0	20	8	20	16	20	24	20	33
25	19	50	19	56	20	5	20	13	20	21	20	29	20	38
26	19	56	20	2	20	10	20	17	20	25	20	34	20	43
27	20	0	20	7	20	14	20	22	20	30	20	39	20	48
28	20	4	20	11	20	19	20	27	20	35	20	44	20	53
29	20	9	20	16	20	23	20	31	20	40	20	48	20	57
30	20	13	20	20	20	28	20	36	20	44	20	53	21	2

Degrees.	North Latitude ♑.													
	6		5		4		3		2		1		0	
	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′
0	19	34	19	40	19	46	19	52	19	59	20	6	20	13
1	19	38	19	44	19	50	19	56	20	3	20	10	20	17
2	19	42	19	48	19	54	20	1	20	8	20	14	20	22
3	19	46	19	52	19	59	20	5	20	12	20	19	20	26
4	19	50	19	56	20	3	20	9	20	16	20	23	20	30
5	19	54	20	0	20	7	20	13	20	20	20	27	20	34
6	19	58	20	4	20	11	20	17	20	24	20	31	20	38
7	20	2	20	8	20	15	20	21	20	28	20	35	20	42
8	20	6	20	12	20	18	20	25	20	32	20	39	20	46
9	20	9	20	16	20	22	20	29	20	36	20	43	20	50
10	20	13	20	19	20	26	20	33	20	39	20	46	20	54
11	20	17	20	23	20	30	20	36	20	43	20	50	20	58
12	20	20	20	27	20	33	20	40	20	47	20	54	21	1
13	20	24	20	30	20	37	20	44	20	51	20	58	21	5
14	20	28	20	34	20	40	20	47	20	54	21	1	21	9
15	20	31	20	38	20	44	20	51	20	58	21	5	21	12
16	20	34	20	41	20	48	20	54	21	1	21	8	21	16
17	20	38	20	44	20	51	20	58	21	5	21	12	21	19
18	20	41	20	48	20	54	21	1	21	8	21	15	21	22
19	20	45	20	51	20	58	21	5	21	12	21	19	21	26
20	20	48	20	55	21	1	21	8	21	15	21	22	21	29
21	20	51	20	58	21	4	21	11	21	18	21	25	21	32
22	20	55	21	1	21	8	21	14	21	21	21	28	21	36
23	20	58	21	4	21	11	21	17	21	24	21	32	21	39
24	21	1	21	7	21	14	21	21	21	28	21	35	21	42
25	21	4	21	10	21	17	21	24	21	32	21	38	21	45
26	21	7	21	13	21	20	21	27	21	34	21	41	21	48
27	21	10	21	16	21	23	21	30	21	37	21	44	21	51
28	21	13	21	19	21	26	21	33	21	39	21	47	21	54
29	21	16	21	22	21	29	21	36	21	42	21	49	21	57
30	21	19	21	25	21	32	21	38	21	45	21	52	21	59

South Latitude ♑.

Degrees.	0		1		2		3		4		5		6	
	h.	'	h.	'	h.	'	h.	'	h.	'	h.	'	h.	'
0	20	13	20	20	20	28	20	36	20	44	20	53	21	2
1	20	17	20	25	20	32	20	40	20	49	20	57	21	7
2	20	22	20	29	20	36	20	45	20	53	21	2	21	11
3	20	26	20	33	20	41	20	49	20	57	21	6	21	16
4	20	30	20	37	20	45	20	53	21	2	21	10	21	20
5	20	34	20	42	20	49	20	57	21	6	21	15	21	24
6	20	38	20	46	20	53	21	2	21	10	21	19	21	28
7	20	42	20	50	20	57	21	6	21	14	21	23	21	32
8	20	46	20	54	21	1	21	10	21	18	21	27	21	36
9	20	50	20	57	21	5	21	13	21	22	21	31	21	40
10	20	54	21	1	21	9	21	17	21	26	21	34	21	44
11	20	58	21	5	21	13	21	21	21	29	21	38	21	48
12	21	1	21	9	21	17	21	25	21	33	21	42	21	51
13	21	5	21	12	21	20	21	28	21	37	21	46	21	55
14	21	9	21	16	21	24	21	32	21	40	21	49	21	59
15	21	12	21	20	21	27	21	35	21	44	21	53	22	2
16	21	16	21	23	21	31	21	39	21	48	21	56	22	6
17	21	19	21	27	21	35	21	42	21	51	21	59	22	9
18	21	22	21	30	21	38	21	46	21	54	22	3	22	12
19	21	26	21	33	21	41	21	49	21	57	22	7	22	15
20	21	29	21	37	21	44	21	52	22	1	22	9	22	18
21	21	32	21	40	21	48	21	56	22	4	22	13	22	22
22	21	36	21	43	21	51	21	59	22	7	22	16	22	25
23	21	39	21	46	21	54	22	2	22	10	22	19	22	28
24	21	42	21	49	21	56	22	5	22	13	22	22	22	30
25	21	45	21	52	22	0	22	8	22	16	22	24	22	33
26	21	48	21	55	22	3	22	11	22	19	22	27	22	36
27	21	51	21	58	22	6	22	14	22	22	22	30	22	39
28	21	54	22	1	22	9	22	16	22	24	22	33	22	41
29	21	57	22	4	22	11	22	19	22	27	22	36	22	44
30	21	59	22	7	22	14	22	22	22	30	22	38	22	47

Degrees.	North Latitude ♒.													
	6		5		4		3		2		1		0	
	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′
0	21	19	21	25	21	32	21	38	21	45	21	52	21	59
1	21	21	21	28	21	34	21	41	21	48	21	55	22	2
2	21	24	21	31	21	37	21	43	21	51	21	58	22	5
3	21	27	21	34	21	40	21	47	21	53	22	0	22	7
4	21	30	21	36	21	43	21	49	21	56	22	3	22	10
5	21	32	21	39	21	45	21	52	21	59	22	6	22	13
6	21	35	21	42	21	48	21	55	22	2	22	8	22	15
7	21	38	21	44	21	51	21	57	22	4	22	11	22	18
8	21	40	21	47	21	53	22	0	22	7	22	13	22	20
9	21	43	21	49	21	56	22	2	22	9	22	16	22	23
10	21	45	21	52	21	58	22	5	22	11	22	18	22	25
11	21	48	21	54	22	1	22	7	22	14	22	21	22	27
12	21	50	21	57	22	3	22	10	22	16	22	23	22	30
13	21	53	21	59	22	6	22	12	22	19	22	25	22	32
14	21	56	22	1	22	8	22	14	22	21	22	28	22	35
15	21	59	22	4	22	10	22	17	22	23	22	30	22	37
16	22	0	22	6	22	13	22	19	22	26	22	32	22	39
17	22	2	22	8	22	15	22	21	22	28	22	34	22	41
18	22	4	22	11	22	17	22	23	22	30	22	37	22	43
19	22	7	22	13	22	19	22	26	22	32	22	39	22	46
20	22	9	22	15	22	21	22	28	22	35	22	41	22	48
21	22	11	22	17	22	24	22	30	22	37	22	43	22	50
22	22	13	22	19	22	26	22	32	22	39	22	45	22	52
23	22	16	22	22	22	28	22	34	22	41	22	47	22	54
24	22	18	22	24	22	30	22	36	22	43	22	50	22	56
25	22	20	22	26	22	32	22	39	22	45	22	52	22	58
26	22	22	22	28	22	34	22	41	22	47	22	54	23	0
27	22	24	22	30	22	36	22	43	22	49	22	55	23	2
28	22	26	22	32	22	38	22	45	22	51	22	57	23	4
29	22	28	22	34	22	40	22	47	22	53	22	59	23	6
30	22	30	22	36	22	42	22	43	22	55	23	1	23	8

Degrees.	South Latitude ♒.													
	0		1		2		3		4		5		6	
	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′
0	21	59	22	7	22	14	22	22	22	30	22	38	22	47
1	22	2	22	9	22	17	22	25	22	32	22	41	22	49
2	22	5	22	12	22	19	22	27	22	35	22	43	22	52
3	22	7	22	15	22	22	22	30	22	38	22	46	22	54
4	22	10	22	17	22	25	22	32	22	40	22	48	22	57
5	22	13	22	20	22	27	22	35	22	43	22	51	22	59
6	22	15	22	23	22	30	22	37	22	45	22	53	23	1
7	22	18	22	25	22	32	22	40	22	47	22	55	23	4
8	22	20	22	27	22	35	22	42	22	50	22	58	23	6
9	22	23	22	30	22	37	22	44	22	52	23	0	23	8
10	22	25	22	32	22	40	22	47	22	54	23	2	23	10
11	22	27	22	35	22	42	22	49	22	57	23	4	23	12
12	22	30	22	37	22	44	22	51	22	59	23	7	23	14
13	22	32	22	39	22	46	22	54	23	1	23	9	23	17
14	22	35	22	41	22	49	22	56	23	3	23	11	23	19
15	22	37	22	44	22	51	22	58	23	5	23	13	23	21
16	22	39	22	46	22	53	23	0	23	7	23	15	23	23
17	22	41	22	48	22	56	23	2	23	10	23	17	23	25
18	22	43	22	50	22	57	23	4	23	12	23	19	23	27
19	22	46	22	52	22	59	23	6	23	14	23	21	23	29
20	22	48	22	55	23	1	23	8	23	16	23	23	23	31
21	22	50	22	57	23	3	23	10	23	18	23	25	23	32
22	22	52	22	59	23	6	23	13	23	20	23	27	23	34
23	22	54	23	1	23	8	23	15	23	21	23	29	23	36
24	22	55	23	3	23	10	23	16	23	23	23	31	23	38
25	22	58	23	5	23	12	23	18	23	25	23	32	23	40
26	23	0	23	7	23	13	23	20	23	27	23	34	23	41
27	23	2	23	9	23	15	23	22	23	29	23	36	23	43
28	23	4	23	11	23	17	23	24	23	31	23	38	23	45
29	23	6	23	12	23	19	23	26	23	33	23	40	23	47
30	23	8	23	14	23	21	23	28	23	34	23	41	23	48

Degrees.	6		5		4		3		2		1		0	
	North Latitude ♓.													
	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′	h.	′
0	22	30	22	36	22	42	22	48	22	55	23	1	23	8
1	22	32	22	38	22	44	22	51	22	57	23	3	23	10
2	22	34	22	40	22	46	22	52	22	59	23	5	23	12
3	22	36	22	42	22	48	22	54	23	1	23	7	23	13
4	22	37	22	44	22	50	22	56	23	3	23	9	23	15
5	22	39	22	46	22	52	22	58	23	4	23	11	23	17
6	22	41	22	47	22	54	23	0	23	6	23	13	23	19
7	22	43	22	49	22	56	23	2	23	8	23	14	23	21
8	22	45	22	51	22	57	23	4	23	10	23	16	23	23
9	22	47	22	53	22	59	23	5	23	12	23	18	23	24
10	22	49	22	55	23	1	23	7	23	14	23	20	23	26
11	22	50	22	57	23	3	23	9	23	15	23	22	23	28
12	22	52	22	58	23	5	23	11	23	17	23	23	23	30
13	22	54	23	0	23	6	23	13	23	19	23	25	23	31
14	22	56	23	2	23	8	23	14	23	21	23	27	23	33
15	22	57	23	4	23	10	23	16	23	22	23	29	23	35
16	22	59	23	5	23	12	23	18	23	24	23	30	23	37
17	23	1	23	7	23	13	23	19	23	26	23	32	23	38
18	23	3	23	9	23	15	23	21	23	28	23	34	23	40
19	23	4	23	10	23	17	23	23	23	29	23	35	23	42
20	23	6	23	12	23	18	23	25	23	31	23	37	23	43
21	23	8	23	14	23	20	23	26	23	32	23	39	23	45
22	23	9	23	16	23	22	23	28	23	34	23	40	23	47
23	23	11	23	17	23	23	23	30	23	36	23	42	23	48
24	23	13	23	19	23	25	23	31	23	38	23	44	23	50
25	23	14	23	21	23	27	23	33	23	39	23	46	23	52
26	23	16	23	22	23	29	23	35	23	41	23	47	23	53
27	23	18	23	24	23	30	23	36	23	43	23	49	23	55
28	23	19	23	26	23	32	23	38	23	44	23	50	23	57
29	23	21	23	27	23	34	23	40	23	46	23	52	23	58
30	23	23	23	29	23	35	23	41	23	48	23	54	24	0

Degrees.	South Latitude ♓.													
	0		1		2		3		4		5		6	
	h.	'	h.	'	h.	'	h.	'	h.	'	h.	'	h.	'
0	23	8	23	14	23	21	23	28	23	34	23	41	23	48
1	23	10	23	16	23	23	23	30	23	36	23	43	23	50
2	23	12	23	18	23	25	23	31	23	38	23	45	23	52
3	23	13	23	20	23	27	23	33	23	40	23	47	23	54
4	23	15	23	22	23	28	23	35	23	42	23	48	23	55
5	23	17	23	24	23	30	23	37	23	43	23	50	23	57
6	23	19	23	25	23	32	23	38	23	45	23	52	23	59
7	23	21	23	27	23	34	23	40	23	47	23	54	24	0
8	23	23	23	29	23	35	23	42	23	49	23	55	24	2
9	23	24	23	31	23	37	23	44	23	51	23	57	24	4
10	23	26	23	33	23	39	23	45	23	52	23	59	24	5
11	23	28	23	34	23	41	23	47	23	54	24	0	24	7
12	23	30	23	36	23	42	23	49	23	55	24	2	24	9
13	23	31	23	38	23	44	23	50	23	57	24	4	24	10
14	23	33	23	39	23	46	23	52	23	59	24	5	24	12
15	23	35	23	41	23	47	23	54	24	0	24	7	24	13
16	23	37	23	43	23	49	23	56	24	2	24	9	24	15
17	23	38	23	45	23	51	23	57	24	4	24	10	24	17
18	23	40	23	46	23	53	23	59	24	5	24	12	24	18
19	23	42	23	48	23	55	24	1	24	7	24	13	24	20
20	23	43	23	50	23	56	24	2	24	9	24	15	24	22
21	23	45	23	51	23	58	24	4	24	10	24	17	24	23
22	23	47	23	53	23	59	24	6	24	12	24	18	24	25
23	23	48	23	55	24	1	24	7	24	13	24	20	24	26
24	23	50	23	56	24	2	24	9	24	15	24	21	24	28
25	23	52	23	58	24	4	24	10	24	17	24	23	24	29
26	23	53	24	0	24	6	24	12	24	18	24	25	24	31
27	23	55	24	1	24	7	24	14	24	20	24	26	24	33
28	23	57	24	3	24	9	24	15	24	22	24	28	24	34
29	23	59	24	5	24	11	24	17	24	23	24	30	24	36
30	24	0	24	6	24	12	24	19	24	25	24	31	24	37

°	*Motion.*	*Time.*	*Motion.*	*Time.*	*Motion.*	*Time.*
′	0	H.	1	H.	2	H.
″	0	0	60	0	120	0
0	000000	0	822185	24	852288	48
1	644370		822903		852648	
2	674473		823609		853006	
3	692082	1	824304	25	853360	49
4	704576		824988		853712	
5	714257	2	825661	26	854061	50
6	722185		826324		854407	
7	728879		826977		854750	
8	734679	3	827620	27	855091	51
9	739794		828255		855429	
10	744370	4	828879	28	855764	52
11	748509		829495		856297	
12	752288		830103		856427	
13	755764	5	830702	29	856755	53
14	758982		831293		857080	
15	761979	6	831876	30	857403	54
16	764782		832451		857723	
17	767414		833019		858042	
18	769897	7	833579	31	858358	55
19	772245		834132		858671	
20	774473	8	834679	32	858982	56
21	776592		835218		859092	
22	778612		835751		859598	
23	780542	9	836277	33	859903	57
24	782391		836798		860206	
25	784164	10	837311	34	860506	58
26	785876		837819		860805	
27	787586		838322		861101	
28	789085	11	838819	35	861396	59
29	790609		839309		861688	
30	792082	12	839794	36	861979	I.

°	*Motion.*	*Time.*	*Motion.*	*Time.*	*Motion.*	*Time.*
′	0	H.	1	H.	2	H.
″	0	0	60	0	120	0
30	792082		839794	36	861979	I
31	793506		840275		862267	
32	794885		840748		862554	
33	796221	13	841218	37	862836	1
34	797517		841682		863122	
35	798776	14	842142	38	863403	2
36	800000		842597		863682	
37	801190		843047		863960	
38	802344	15	843492	39	864235	3
39	803476		843933		864509	
40	804575	16	844370	40	864782	4
41	805648		844802		865050	
42	806695		845230		865321	
43	807716	17	845653	41	865588	5
44	808715		846073		865854	
45	809691	18	846488	42	866118	6
46	810645		846900		866380	
47	811579		847308		866641	
48	812494	19	847712	43	866901	7
49	813989		848112		867158	
50	814267	20	848509	44	867415	8
51	815127		848902		867669	
52	815970		849292		867922	
53	816797	21	849677	45	868174	9
54	817609		850060		868425	
55	818406	22	850439	46	868673	10
56	819188		850815		868921	
57	819957		851188		869177	
58	820712	23	851558	47	869412	11
59	821455		851924		869655	
60	822185	42	852288	48	869897	12

2	*Motion.*	*Time.*	*Motion.*	*Time.*	*Motion.*	*Time.*
I	3	H.	4	H.	5	H.
II	180	1	240	1	300	II.
0	869897	12	882391	36	892082	0
1	870137		882571		892222	
2	870377		882751		892370	
3	870615	13	882931	37	892514	1
4	870851		883109		892657	
5	871087	14	883286	38	892800	2
6	871321		883463		892942	
7	871554		883639		893083	
8	871785	15	883815	39	893225	3
9	872086		883990		893365	
10	872244	16	884164	40	893506	4
11	872472		885337		893646	
12	872700		884519		893785	
13	872925	17	884682	41	893924	5
14	873150		884853		894062	
15	873373	18	885024	42	894201	6
16	873595		885164		894338	
17	873816		885363		894476	
18	874036	19	885532	43	894616	7
19	874254		885700		894746	
20	874473	20	885867	44	894885	8
21	874689		886034		895020	
22	874905		886200		895155	
23	875119	21	886365	45	895290	9
24	875333		886530		895424	
25	875545	22	886694	46	895558	10
26	875756		886858		895691	
27	875967		887021		895824	
28	876176	23	887183	47	895957	11
29	876384		887345		896089	
30	876592	24	887506	48	896221	12

°	*Motion.*	*Time.*	*Motion.*	*Time.*	*Motion.*	*Time.*
′	3	H.	4	H.	5	H.
″	180	1	240	1	300	II.
30	876592	24	887506	48	896221	12
31	876790		887667		896352	
32	877003		887827		896483	
33	877208	25	887986	49	896614	13
34	877412		888145		896744	
35	877613	26	888303	50	896874	14
36	877815		888461		897004	
37	878016		888618		897133	
38	878215	27	888774	51	897261	15
39	878414		888930		897390	
40	878612	28	889035	52	897517	16
41	878809		889240		897645	
42	879004		889395		897772	
43	879220	29	889548	53	897899	17
44	879394		889701		898025	
45	879588	30	889854	54	898152	18
46	879780		890006		898277	
47	879972		890158		898403	
48	880162	31	890308	55	898528	19
49	880373		890459		898652	
50	880542	32	890609	56	898776	20
51	880731		890758		898900	
52	880928		890908		899024	
53	881105	33	891156	57	899147	21
54	881290		891204		899270	
55	881476	34	891325	58	899362	22
56	881661		891499		899515	
57	881844		891644		899636	
58	882027	35	891791	59	899758	23
59	882209		891937		899876	
60	882391	36	892082	II.	900000	24

♀	*Motion.*	*Time.*	*Motion.*	*Time.*	*Motion*	*Time.*
′	6	H.	7	H.	8	H.
″	360	II	420	II	480	III
0	900000	24	906695	48.	912494	12
1	900120		906798		912584	
2	900240		906901		912674	
3	900360	25	907004	49	912764	13
4	900480		907106		912854	
5	900599	26	907208	50	912944	14
6	900718		907310		913033	
7	900836		907412		913122	
8	900954	27	907514	51	913212	15
9	901972		907615		913300	
10	901190	28	907716	52	913389	16
11	901307		907817		913478	
12	901424		907918		913566	
13	901540	29	908018	53	913654	17
14	901657		908119		913742	
15	901773	30	908219	54	913830	18
16	901887		908318		913918	
17	902004		908418		914005	
18	902119	31	908517	55	914093	19
19	902234		908616		914180	
20	902348	32	908715	56	914267	20
21	902462		908813		914353	
22	902576		908912		914440	
23	902689	33	909011	57	914526	21
24	902803		909108		914613	
25	902916	34	909206	58	914699	22
26	903028		909304		914785	
27	903141		909401		914870	
28	903253	35	909497	59	914956	23
29	903365		909594		915041	
30	903476	36	909691	III	915127	24

°	*Motion.*	*Time.*	*Motion.*	*Time.*	*Motion.*	*Time.*
′	6	H.	7	H.	8	H.
″	360	II	420	III	480	III
30	903476	36	909691	0	915127	24
31	903587		909787		915212	
32	903698		909883		915297	
33	903809	37	909979	1	915381	25
34	903919		910075		915465	
35	904029	38	910171	2	915550	26
36	904139		910267		915635	
37	904249		910361		915720	
38	904358	39	910456	3	915803	27
39	904467		910551		915886	
40	904576	40	910645	4	915970	28
41	904684		910740		916053	
42	904792		910834		916137	
43	904900	41	910928	5	916220	29
44	905008		911021		916303	
45	905115	42	911115	6	916383	30
46	905222		911208		916468	
47	905329		911301		916551	
48	905436	43	911394	7	916633	31
49	905542		911487		916715	
50	905648	44	911579	8	916797	32
51	905754		911672		916879	
52	905859		911764		916961	
53	905965	45	911856	9	917042	33
54	906070		911947		917124	
55	906174	46	912039	10	917205	34
56	906279		912130		917286	
57	906383		912221		917367	
58	906487	47	912312	11	917448	35
59	906591		912403		917528	
60	906695	48	912494	12	917609	36

°	*Motion*	*Time.*	*Motion.*	*Time.*	*Motion.*	*Time.*
'	9	H.	10	H.	11	H.
''	540	III	600	IV	660	IV
0	917609	36	922185	0	926324	24
1	917689		922257		926390	
2	917770		922329		926455	
3	917850	37	922401	1	926521	25
4	917929		922473		926586	
5	918009	38	922545	2	926652	26
6	918089		922617		926717	
7	918168		922688		926782	
8	918248	39	922760	3	926847	27
9	918327		922831		926912	
10	918406	40	922903	4	926977	28
11	918485		922974		927042	
12	918564		923045		927107	
13	918642	41	923116	5	927171	29
14	918721		923186		927236	
15	918799	42	923257	6	927300	30
16	918877		923328		927364	
17	918955		923398		927428	
18	919033	43	923468	7	927493	31
19	919111		923539		927557	
20	919188	44	923609	8	927620	32
21	919266		923679		927684	
22	919343		923749		927748	
23	919420	45	923818	9	927812	33
24	919498		923888		927875	
25	919574	46	923958	10	927936	34
26	919651		924027		928002	
27	919728		924096		928065	
28	919804	47	924166	11	928128	35
29	919881		924235		928192	
30	919957	48	924304	12	928255	36

°	*Motion.*	*Time.*	*Motion.*	*Time.*	*Motion.*	*Time.*
′	9	H.	10	H.	11	H.
″	540	III	600	IV	660	IV
30	919957	48	924304	12	928255	36
31	920033		924373		928317	
32	920109		924441		928380	
33	920185	49	924510	13	928443	37
34	920261		924579		928506	
35	920336	50	924647	14	928568	38
36	920413		924715		928631	
37	920487		924784		928693	
38	920562	51	924852	15	928755	39
39	920637		924920		928817	
40	920712	52	924988	16	928879	40
41	920787		925055		928941	
42	920863		925123		929003	
43	920936	53	925191	17	929065	41
44	921011		925258		929127	
45	921085	54	925326	18	929189	42
46	921159		925393		929250	
47	921233		925460		929312	
48	921307	55	925527	19	929373	43
49	921381		925594		929434	
50	921455	56	925661	20	929495	44
51	921527		925728		929557	
52	921603		925794		929618	
53	921675	57	925861	21	929679	45
54	921748		925927		929739	
55	921821	58	925994	22	929800	46
56	921894		926060		929861	
57	921967		926126		929922	
58	922040	59	926192	23	929982	47
59	922112		926258		930042	
60	922185	IV	926324	24	930103	48

°	*Motion.*	*Time.*	*Motion.*	*Time.*	*Motion.*	*Time.*
′	12	H.	13	H.	14	H.
″	720	IV	780	V	840	V
0	930103	48	933579	12	936798	36
1	930163		933635		936849	
2	930223		933690		936901	
3	930283	49	933746	13	936952	37
4	930343		933801		937004	
5	930403	50	933857	14	937004	38
6	930463		933912		937107	
7	930523		933967		937158	
8	930583	51	934022	15	937209	39
9	930642		934077		937260	
10	930700	52	934142	16	937311	40
11	930761		934187		937362	
12	930821		934243		937414	
13	930881	53	934297	17	937465	41
14	930939		934352		937515	
15	930998	54	934406	18	937565	42
16	931057		934461		937617	
17	931116		934516		937668	
18	931175	55	934570	19	937718	43
19	931234		934624		937769	
20	931292	56	934679	20	937819	44
21	931251		934733		937869	
22	931410		934787		937919	
23	931468	57	934841	21	937971	45
24	931527		934895		938021	
25	931585	58	934949	22	938071	46
26	931643		935003		938121	
27	931702		935057		938172	
28	931760	59	935111	23	938222	47
29	931810		935164		938272	
30	931876	V	935218	24	938322	48

°	*Motion.*	*Time.*	*Motion.*	*Time.*	*Motion.*	*Time.*
ʹ	12	H	13	H.	14	H.
ʹʹ	720	V	780	V	840	V
30	931876	0	935218	24	938322	48
31	931931		935272		938371	
32	931991		935325		938421	
33	932049	1	935478	25	938471	49
34	932107		935432		938521	
35	932164	2	935485	26	938570	50
36	932222		935539		938620	
37	932279		935592		938670	
38	932337	3	935645	27	938720	51
39	932394		935698		938768	
40	932451	4	935751	28	938818	52
41	932508		935804		938867	
42	932565		935857		938916	
43	932622	5	935910	29	938966	53
44	932679		935962		939015	
45	932736	6	936015	30	939064	54
46	932792		936068		939113	
47	932849		936120		939162	
48	932906	7	939173	31	939211	55
49	932962		936225		939260	
50	933019	8	936277	32	939309	56
51	933075		936330		939357	
52	933131		936382		939406	
53	933188	9	936434	33	939455	57
54	933244		936486		939503	
55	933300	10	936538	34	939552	58
56	933356		936590		939600	
57	933412		936642		939649	
58	933468	11	936694	35	939697	56
59	933523		936746		939746	
60	933579	12	936789	36	939794	VI

°	*Motion.*	*Time.*	*Motion.*	*Time.*	*Motion.*	*Time.*
′	15	H.	16	H.	17	H.
″	900	VI	960	VI	1020	VI
0	939794	0	942597	24	945230	48
1	939842		942642		945272	
2	939898		942687		945315	
3	939938	1	942732	25	945357	49
4	939986		942777		945399	
5	940034	2	942822	26	945442	50
6	940082		942867		945484	
7	940130		942912		945527	
8	940178	3	942957	27	945569	51
9	940226		943003		945611	
10	940274	4	943047	28	945653	52
11	940321		943091		945695	
12	940369		943136		945737	
13	940417	5	943181	29	945780	53
14	940464		943225		945822	
15	940512	6	943270	30	945864	54
16	940559		943314		945906	
17	940607		943359		945947	
18	940654	7	943403	31	945989	55
19	940701		943448		946031	
20	940748	8	943492	32	946073	56
21	940796		943536		946115	
22	940843		943581		946156	
23	940890	9	943625	33	946198	57
24	940937		943669		946240	
25	940984	10	943713	34	946281	58
26	941031		943757		946323	
27	941078		943801		946364	
28	941124	11	943845	35	946406	59
29	941171		943889		946447	
30	941218	12	943933	36	946488	VII

o	*Motion*	*Time.*	*Motion.*	*Time.*	*Motion.*	*Time.*
′	15	H.	16	H.	17	H.
″	900	VI	960	VI	1020	VII
30	941218	12	943933	36	946488	0
31	941265		943977		946530	
32	941311		944021		946570	
33	941358	13	944064	37	946612	1
34	941404		944108		946654	
35	941451	14	944152	38	946695	2
36	941497		944195		946737	
37	941544		944239		946777	
38	941590	15	944283	39	946818	3
39	941636		944326		946859	
40	941682	16	944370	40	946899	4
41	941729		944413		946941	
42	941775		944456		946982	
43	941821	17	944500	41	947023	5
44	941867		944543		947064	
45	941913	18	944586	42	947105	6
46	941959		944629		947145	
47	942005		944673		947186	
48	942050	19	944716	43	947227	7
49	942096		944759		947267	
50	942142	20	944802	44	947307	8.
51	942188		944845		947349	
52	942233		944888		947389	
53	942279	21	944930	45	947430	9
54	942324		944973		947470	
55	942370	22	945016	46	947511	10
56	942415		945059		947551	
57	942461		945102		947591	
58	942506	23	945145	47	947631	11
59	942550		945187		947673	
60	942597	24	945230	48	947712	12

°	*Motion.*	*Time.*	*Motion.*	*Time.*	*Motion.*	*Motion.*
′	18	H.	19	H.	20	H.
″	1080	VII	1140	VII	1200	VIII
0	947712	12	950060	36	952288	0
1	947752		950098		952324	
2	947791		950136		952360	
3	947832	13	950174	37	952396	1
4	947873		950212		952432	
5	947913	14	950250	38	952468	2
6	947953		950288		952504	
7	947993		950326		952540	
8	948033	15	950364	39	952576	3
9	948072		950402		952612	
10	948112	16	950440	40	952648	4
11	948152		950478		952684	
12	948192		950515		952720	
13	948232	17	950553	41	952756	5
14	948272		950590		952791	
15	948311	18	950628	42	952827	6
16	948351		950665		952863	
17	948390		950703		952899	
18	948430	19	950740	43	952934	7
19	948469		950778		952970	
20	948509	20	950815	44	953006	8
21	948548		950853		953041	
22	948588		950890		953077	
23	948627	21	950928	45	953112	9
24	948667		950965		953148	
25	948706	22	951002	46	953183	10
26	948745		951039		953219	
27	948784		951076		953245	
28	948824	23	951114	47	953289	11
29	948863		951151		953325	
30	948902	24	951188	48	953360	12

°	*Motion.*	*Time.*	*Motion.*	*Time.*	*Motion.*	*Time.*
′	18	H.	19	H.	20	H.
″	1080	VII	1140	VII	1200	VIII
30	948902	24	951188	48	953360	12
31	948941		951225		953395	
32	948980		951262		953431	
33	949019	25	951299	49	953466	13
34	949058		951336		953501	
35	949097	26	951373	50	953536	14
36	949136		951410		953571	
37	949175		951447		953607	
38	949214	27	951484	51	953642	15
39	949253		951521		953677	
40	949291	28	951558	52	953712	16
41	949330		951594		953747	
42	949369		951631		953788	
43	949408	29	951668	53	953817	17
44	949446		951705		953852	
45	949485	30	951741	54	953887	18
46	949523		951778		953921	
47	949562		951815		953956	
48	949601	31	951851	55	953991	19
49	949639		951888		954026	
50	949677	32	951924	56	954061	20
51	949716		951961		954095	
52	949754		951997		954130	
53	949793	33	952934	57	954165	21
54	949831		952070		954199	
55	949869	34	952106	58	954234	22
56	949907		952143		954269	
57	949946		952179		954303	
58	949984	35	952215	59	954338	23
59	950022		952252		954372	
60	950060	36	952288	VIII	954407	24

2	*Motion.*	*Time.*	*Motion.*	*Time.*	*Motion*	*Time.*
′	21	H.	22	H.	23	H.
″	1260	VII	1320	VIII	1380	IX
0	954407	24	956427	48	958358	12
1	954441		956460		958389	
2	954476		956490		958420	
3	954510	25	956526	49	958452	13
4	954544		956558		958483	
5	954579	26	956591	50	958515	14
6	954613		956624		958546	
7	954647		956657		958577	
8	954682	27	956689	51	958609	15
9	954716		956722		958640	
10	954750	28	956755	52	958671	16
11	954784		956787		958702	
12	954818		956820		958734	
13	954852	29	956853	53	958765	17
14	954887		956885		958796	
15	954921	30	956918	54	958827	18
16	954955		956950		958858	
17	954989		956983		958889	
18	955023	31	957015	55	958920	19
19	955057		957048		958951	
20	955091	32	957080	56	958982	20
21	955125		957112		959013	
22	955158		957145		959044	
23	955162	33	957177	57	959075	21
24	955226		957210		959106	
25	955260	34	957242	58	959137	22
26	955294		957274		959168	
27	955327		957306		956199	
28	955361	35	957339	59	959230	23
29	955395		957371		959261	
30	955429	36	957406	IX	959292	24

°	*Motion.*	*Time.*	*Motion.*	*Time.*	*Motion.*	*Time.*
′	21	H.	22	H.	23	H.
″	1260	VIII	1320	IX	1380	IX
30	955429	36	957406	0	959292	24
31	955462		957435		959322	
32	955496		957467		959353	
33	955529	37	957499	1	959384	25
34	955563		957531		959415	
35	955597	38	957503	2	959446	26
36	955636		957595		959476	
37	955664		957628		959507	
38	955697	39	957660	3	959537	27
39	955731		957692		959568	
40	955764	40	957723	4	959598	28
41	955797		957755		959629	
42	955831		957787		959660	
43	955864	41	957819	5	959690	29
44	955897		957851		959721	
45	955932	42	957883	6	959751	30
46	955954		957915		959782	
47	955997		957946		959812	
48	956030	43	957978	7	959842	31
49	956064		958010		959872	
50	956097	44	958042	8	959903	32
51	956130		958073		959934	
52	956163		958105		959964	
53	956196	45	958137	9	959994	33
54	956229		958168		960025	
55	956262	46	958200	10	960055	34
56	956295		958231		960085	
57	956328		958263		960115	
58	956361	47	958295	11	960145	35
59	956394		958326		960176	
60	956427	48	958358	12	960206	36

°	*Motion*	*Time.*	*Motion.*	*Time.*	*Motion.*	*Time.*
′	24	H.	25	H.	26	H.
″	1440	IX	1500	X	1560	X
0	960206	36	961979	0	963682	24
1	960236		962008		963710	
2	960266		962037		963738	
3	960296	37	962065	1	963765	25
4	960326		962094		963793	
5	960356	38	962123	2	963821	26
6	960386		962152		963849	
7	960416		962181		963875	
8	960446	39	962210	3	963904	27
9	960476		962239		963932	
10	960506	40	962267	4	963960	28
11	960536		962296		963987	
12	960566		962325		964015	
13	960596	41	962353	5	964042	29
14	960626		962382		964070	
15	960656	42	962411	6	964098	30
16	960686		962440		964125	
17	960716		962468		964153	
18	960745	43	962497	7	964180	31
19	960775		962525		964208	
20	960805	44	962554	8	964235	32
21	960835		962583		964263	
22	960864		962611		964290	
23	960894	45	962640	9	964318	33
24	960924		962668		964345	
25	960953	46	962697	10	964373	34
26	960983		962725		964400	
27	961013		962754		964427	
28	961042	47	962782	11	964455	35
29	961072		962810		964482	
30	961101	48	962839	12	964509	36

°	*Motion.*	*Time.*	*Motion.*	*Time.*	*Motion.*	*Time.*
'	24	H.	25	H.	26	H.
"	1440	IX	1500	X	660	X
30	961101	48	962839	12	964509	36
31	961131		962867		964537	
32	961160		962895		964564	
33	961190	49	962925	13	964591	37
34	961219		962952		964618	
35	961249	50	962980	14	964646	38
36	961278		963009		964674	
37	961308		963037		964700	
38	961337	51	963065	15	964727	39
39	961366		963093		964754	
40	961396	52	963120	16	964782	40
41	961425		963150		964809	
42	961454		963178		964836	
43	961484	53	963206	17	964863	41
44	961513		963234		964890	
45	961542	54	963262	18	964917	42
46	961571		963291		964944	
47	961601		963320		964971	
48	961630	55	963347	19	964998	43
49	961659		963375		965025	
50	961688	56	963404	20	965052	44
51	961717		963431		965079	
52	961746		963450		965106	
53	961775	57	963487	21	965133	45
54	961804		963518		965160	
55	961834	58	963543	22	965187	46
56	961863		963571		965214	
57	961892		963598		965241	
58	961921	59	963620	23	965267	47
59	961950		963654		965294	
60	961979	X	963682	24	965321	48

°	*Motion.*	*Time*	*Motion.*	*Time.*	*Motion.*	*Time.*
′	27	H.	28	H.	29	H.
″	1620	X	1080	XI	1740	XI
0	965321	48	966901	12	968425	36
1	965348		966926		968449	
2	965375		966952		968473	
3	965401	49	966978	13	968499	37
4	965428		967004		968524	
5	965455	50	967030	14	968549	38
6	965428		967055		968574	
7	965508		967081		968599	
8	965535	51	967107	15	968624	39
9	965562		967133		968649	
10	965588	52	967158	16	968673	40
11	965615		967184		968698	
12	965642		967210		968723	
13	965668	53	967235	17	968748	41
14	965695		967261		968773	
15	965721	54	967287	18	968797	42
16	965748		967312		968822	
17	965774		967338		968847	
18	965801	55	967363	19	968871	43
19	965827		967389		968896	
20	965854	56	967314	20	968921	44
21	965880		967439		968946	
22	965907		967466		968970	
23	965933	57	967492	21	968995	45
24	965960		967517		969019	
25	965980	58	967542	22	969044	46
26	966063		967568		969069	
27	966039		967595		969093	
28	966005	59	967618	23	969118	47
29	966092		967644		969142	
30	960118	XI	967688	24	969167	48

°	*Motion.*	*Time.*	*Motion.*	*Time.*	*Motion.*	*Time.*
′	27	H.	28	H.	29	H.
″	1620	XI	1680	XI	1740	XI
30	966118	0	967688	24	969167	48
31	966144		967695		969191	
32	966171		967720		969216	
33	966197	1	967745	25	969240	49
34	966223		967771		969265	
35	966249	2	967796	26	969289	50
36	966276		967821		969314	
37	966302		967847		969338	
38	966328	3	967872	27	969363	51
39	966354		967897		969390	
40	966380	4	967922	28	969412	52
41	966407		967943		969438	
42	966433		967973		969460	
43	966459	5	967998	29	969485	53
44	966485		968023		969509	
45	966511	6	968049	30	969533	54
46	966537		968074		969558	
47	966563		968099		969582	
48	966589	7	968124	31	969606	55
49	966615		968149		969631	
50	966641	8	968174	32	969655	56
51	966667		968199		969680	
52	966693		968224		969703	
53	966719	9	968249	33	969728	57
54	966745		968275		969752	
55	966771	10	968300	34	969776	58
56	966797		968325		969800	
57	966823		968350		969824	
58	966849	11	968375	35	969848	59
59	966875		968400		969873	
60	966901	12	968425	36	969897	XII

°	*Motion.*	*Time.*	*Motion.*	*Time.*	*Motion.*	*Time.*
′	30	H.	31	H.	32	H.
″	1800	XII	1860	XII	1920	XII
0	969897	0	971321	24	972700	48
1	969922		971344		972723	
2	969944		971368		972745	
3	969969	1	971391	25	972768	49
4	969993		971414		972790	
5	970017	2	971437	26	972813	50
6	970041		971461		972836	
7	970065		971384		972858	
8	970089	3	971507	27	972880	51
9	970113		971531		972903	
10	970137	4	971554	28	972925	52
11	970161		971577		972948	
12	970185		971600		972970	
13	970209	5	971623	29	972993	53
14	970233		971647		973015	
15	970257	6	971670	30	973038	54
16	970281		971693		973060	
17	970305		971716		973083	
18	970330	7	971740	31	973105	55
19	970353		971762		973127	
20	970377	8	971785	32	973150	56
21	970399		971808		973173	
22	970424		971832		973195	
23	970448	9	971855	33	973217	57
24	970472		971878		973239	
25	970496	10	971901	34	973262	58
26	970520		971924		973284	
27	970543		971947		973306	
28	970567	11	971970	35	973329	59
29	970591		971993		973351	
30	970615	12	972016	36	973374	XIII

°	*Motion.*	*Time.*	*Motion.*	*Time.*	*Motion.*	*Time.*
'	30	H.	31	H.	32	H.
''	1800	XII	1860	XII	1920	XIII
30	970615	12	972061	36	973374	0
31	970638		972039		973395	
32	970662		972062		973418	
33	970686	13	972085	37	973440	1
34	970709		972108		973462	
35	970733	14	972131	38	973464	2
36	970757		972153		973506	
37	970781		972176		973528	
38	970804	15	972199	39	973550	3
39	970828		972222		973572	
40	970851	16	972245	40	973545	4
41	970875		972268		973617	
42	970899		972291		973640	
43	970922	17	972313	41	973662	5
44	970946		972336		973684	
45	970270	18	972359	42	973706	6
46	970994		972382		973728	
47	971017		972405		973750	
48	971040	19	972437	43	973772	7
49	971063		972450		973794	
50	971087	20	972473	44	973816	8
51	971110		972496		973838	
52	971133		972518		973860	
53	971157	21	972540	45	973883	9
54	971181		972563		973904	
55	971204	22	972568	46	973926	10
56	971227		972609		973948	
57	971251		972623		973970	
58	971274	23	972654	47	973993	11
59	971298		972677		974014	
60	971321	24	972700	48	974036	12

°	*Motion.*	*Time.*	*Motion.*	*Time.*	*Motion.*	*Time.*
'	33	H.	34	H.	35	H.
''	1980	XIII	2040	XIII	2100	XIV
0	974036	12	975333	36	976591	0
1	974058		975355		976612	
2	974080		975375		976633	
3	974102	13	975397	37	976654	1
4	974124		975418		976675	
5	974146	14	975439	38	976695	2
6	974168		975460		976715	
7	974191		975481		976736	
8	974211	15	975503	39	976757	3
9	974233		975524		976778	
10	974255	16	975549	40	976798	4
11	974277		975566		976818	
12	974299		975588		976839	
13	974320	17	975608	41	976860	5
14	974342		975630		976880	
15	974364	18	975651	42	976901	6
16	974380		975672		976922	
17	974407		975693		976942	
18	974429	19	975714	43	976962	7
19	974451		975735		976982	
20	974473	20	975756	44	977003	8
21	974494		975777		977024	
22	974516		975799		977044	
23	974538	21	975820	45	977065	9
24	974560		975841		977085	
25	974581	22	975862	46	977106	10
26	974602		975884		977126	
27	974624		975904		977146	
28	974646	23	975925	47	977167	11
29	974668		975946		977187	
30	974690	24	975967	48	977208	12

°	*Motion*	*Time.*	*Motion.*	*Time.*	*Motion.*	*Time.*
′	33	H.	34	H.	35	H.
″	1980	XII	2040	XIII	2100	XIV
30	97469	24	975967	48	977208	12
31	974711		975988		977228	
32	974733		976009		977248	
33	974754	25	976030	49	977269	13
34	974776		976050		977286	
35	974798	26	976071	50	977306	14
36	974819		976092		977330	
37	974840		976113		977350	
38	974862	27	976134	51	977370	15
39	974883		976155		977391	
40	974905	28	976176	52	977411	16
41	974927		976197		977431	
42	974948		976218		977452	
43	974969	29	976239	53	977472	17
44	974990		976259		977492	
45	975012	30	976280	54	977513	18
46	975034		976301		977533	
47	975056		976322		977553	
48	975077	31	976243	55	977573	19
49	975098		976364		977593	
50	975119	32	976384	56	977613	20
51	975141		976404		977634	
52	975163		976426		977654	
53	975183	33	976447	57	977674	21
54	975205		976469		977694	
55	975227	34	976488	58	977714	22
56	975249		976509		977734	
57	975268		976529		977755	
58	975290	35	976550	59	977775	23
59	975311		976571		977795	
60	975333	36	976591	XIV	977815	24

2	*Motion.*	*Time.*	*Motion.*	*Time.*	*Motion*	*Time.*
′	36	H.	37	H.	38	H.
″	2160	XIV	2220	XIV	2280	XV
0	977815	24	979005	48	980163	12
1	977835		979024		980182	
2	977855		979044		980201	
3	977875	25	979063	49	980220	13
4	977895		979083		980239	
5	977915	26	979103	50	980258	14
6	977935		979122		980277	
7	977955		979142		980296	
8	977975	27	979161	51	980305	15
9	977995		979181		980334	
10	978015	28	979200	52	980353	16
11	978035		979220		980372	
12	978055		979240		980391	
13	978075	29	979258	53	980401	17
14	978095		979279		980429	
15	978115	30	979297	54	980448	18
16	978135		979316		980467	
17	978155		979336		980486	
18	978175	31	979356	55	980505	19
19	978195		979375		980524	
20	978215	32	979394	56	980543	20
21	978235		979414		980561	
22	978255		979434		980580	
23	978275	33	979453	57	980599	21
24	978295		979452		980619	
25	978315	34	979491	58	980637	22
26	978335		979510		980656	
27	978354		979530		980674	
28	978374	35	979549	59	980693	23
29	978394		979569		980712	
30	978414	36	979588	XV	980731	24

°	*Motion.*	*Time.*	*Motion.*	*Time.*	*Motion.*	*Time.*
'	36	H.	37	H.	38	H.
''	2160	XIV	2220	XV	2280	XV
30	978414	36	979588	0	980731	24
31	978434		979607		980750	
32	978454		979626		980768	
33	978473	37	979645	1	980787	25
34	978493		979665		980806	
35	978513	38	979684	2	980825	26
36	978533		979704		980843	
37	978553		979723		980862	
38	978573	39	979742	3	980881	27
39	978592		979761		980990	
40	978612	40	979780	4	980918	28
41	978632		979800		980937	
42	978652		979819		980959	
43	978671	41	979838	5	980975	29
44	978691		979857		980993	
45	978710	42	979876	6	981012	30
46	978730		979895		981031	
47	978750		979915		981050	
48	978770	43	979934	7	981068	31
49	978789		979953		981087	
50	978809	44	979972	8	981105	32
51	978828		979991		981124	
52	978848		980010		981142	
53	978868	45	980029	9	981161	33
54	978887		980049		981180	
55	978907	46	980068	10	981198	34
56	978927		980087		981217	
57	978946		980106		981235	
58	978966	47	980125	11	981254	35
59	978985		980144		981273	
60	979005	48	980163	12	981291	36

°	*Motion.*	*Time.*	*Motion.*	*Time.*	*Motion.*	*Time.*
′	39	H.	40	H.	41	H.
″	2340	XV	2400	XVI	2460	XVI
0	981291	36	982391	0	983463	24
1	981310		982409		983481	
2	981328		982427		983498	
3	981347	37	982445	1	983516	25
4	981365		982463		983534	
5	981384	38	982481	2	983551	26
6	981402		982499		983569	
7	981421		982517		983587	
8	981440	39	982535	3	983604	27
9	981458		982553		983622	
10	981476	40	982571	4	983639	28
11	981495		982589		983657	
12	981513		982607		983604	
13	981532	41	982625	5	983692	29
14	981550		982643		983710	
15	981569	42	982661	6	983727	30
16	981587		982699		983745	
17	981606		982697		983762	
18	981624	43	982715	7	983780	31
19	981642		982733		983798	
20	981661	44	982751	8	983815	32
21	981680		982769		983832	
22	981698		982787		983850	
23	981716	45	982805	9	983867	33
24	981734		982823		983885	
25	981753	46	982841	10	983902	34
26	981771		982859		983920	
27	981789		982877		983937	
28	981808	47	982893	11	983955	35
29	981826		982912		983972	
30	981844	48	982930	12	983990	36

°	Motion.	Time.	Motion.	Time.	Motion.	Time.
′	39	H	40	H	41	H.
″	2340	XV	2400	XVI	2460	XVI
30	981844	48	982930	12	983990	36
31	981863		982948		984007	
32	981881		982966		984024	
33	981890	49	982984	13	984043	37
34	981918		983002		984059	
35	981936	50	983020	14	984077	38
36	981954		983037		984094	
37	981973		983055		984111	
38	981991	51	983073	15	984129	39
39	982009		983091		984146	
40	982027	52	983109	16	984164	40
41	982046		983126		984181	
42	982064		983144		984198	
43	982082	53	983162	17	984216	41
44	982100		983179		984233	
45	982118	54	983197	18	984250	42
46	982137		983215		984268	
47	982155		983233		984285	
48	982173	55	983251	19	984302	43
49	982191		983268		984320	
50	982200	56	983286	20	984337	44
51	982228		983304		984354	
52	982246		983322		984375	
53	982264	57	983339	21	984389	45
54	982282		983357		984406	
55	982300	58	983375	22	984423	46
56	982318		983393		984441	
57	982336		983410		984458	
58	982355	59	983428	23	984475	47
59	982373		983445		9844 2	
60	982391	XVI	983463	24	984510	48

°	*Motion.*	*Time.*	*Motion.*	*Time.*	*Motion.*	*Time.*
'	42	H.	43	H.	44	H.
''	2520	XVI	2580	XVII	2640	XVII
0	984510	48	985532	12	986530	36
1	984527		985548		986546	
2	984544		985565		986563	
3	984561	49	985582	13	986579	37
4	984579		985599		986596	
5	984586	50	985616	14	986612	38
6	984613		985632		986629	
7	984630		985649		986645	
8	984647	51	985666	15	986661	39
9	984664		985683		986678	
10	984682	52	985700	16	986694	40
11	984699		985716		986711	
12	984716		985733		986727	
13	984733	53	985750	17	986743	41
14	984750		985767		986760	
15	984767	54	985783	18	986776	42
16	984785		985800		986792	
17	984802		985817		986809	
18	984819	55	985834	19	986825	43
19	984836		985850		986841	
20	984853	56	985867	20	986858	44
21	984870		985884		986874	
22	984887		985900		986890	
23	984903	57	985917	21	986907	45
24	984921		985934		986923	
25	984938	58	985950	22	986939	46
26	984955		985967		986956	
27	984972		985984		986972	
28	984990	59	986000	23	986988	47
29	985007		986017		987004	
30	985024	XVIII	986034	24	987021	48

°	*Motion.*	*Time.*	*Motion.*	*Time.*	*Motion.*	*Time.*
′	42	H.	43	H.	44	H.
″	2520	XVII	2580	XVII	2640	XVII
30	985024	0	986034	24	987021	48
31	985041		986050		987037	
32	985058		986067		987053	
33	985075	1	986084	25	987069	49
34	985092		986100		987086	
35	985109	2	986117	26	987102	50
36	985126		986133		987118	
37	985143		986150		937134	
38	985169	3	986167	27	987151	51
39	985177		986183		987167	
40	985194	4	986200	28	987183	52
41	985211		986216		987199	
42	985228		986233		987215	
43	985244	5	986246	29	987232	53
44	985261		986266		987248	
45	985278	6	986283	30	987264	54
46	985295		986299		987280	
47	985312		986316		987296	
48	985327	7	986332	31	987313	55
49	985346		986349		987329	
50	985363	8	986365	32	987345	56
51	985380		986382		987361	
52	985397		986398		987377	
53	985314	9	986415	33	987393	57
54	985430		986431		987409	
55	985447	10	986448	34	987425	58
56	985464		986464		987442	
57	985481		986481		987458	
58	985498	11	986498	35	987474	59
59	985515		986514		987490	
60	985532	12	986530	36	987506	XVIII

°	*Motion.*	*Time.*	*Motion.*	*Time.*	*Motion.*	*Time.*
'	45	H.	46	H.	47	H.
''	2700	XVIII	2760	XVIII	2820	XVIII
0	987506	0	988461	24	989395	48
1	987522		988476		989410	
2	987538		988492		989425	
3	987554	1	988508	25	989440	49
4	987570		988523		989456	
5	987586	2	988539	26	989471	50
6	987602		988555		989487	
7	987618		988571		989502	
8	987634	3	988586	27	989518	51
9	987651		988602		989533	
10	987667	4	988618	28	989548	52
11	987683		988633		989564	
12	987699		988649		989579	
13	987715	5	988665	29	989594	53
14	987731		988680		989610	
15	987747	6	988696	30	989625	54
16	987763		988712		989640	
17	987778		988727		989656	
18	987795	7	988743	31	989671	55
19	987811		988758		989686	
20	987826	8	988774	32	989701	56
21	987842		988790		989717	
22	987858		988805		989732	
23	987874	9	988821	33	989747	57
24	987890		988837		989763	
25	987906	10	988852	34	989778	58
26	987922		988868		989793	
27	987938		988883		989808	
28	987954	11	988899	35	989824	59
29	987970		988914		989839	
30	987986	12	988929	36	989854	XIX

°	*Motion.*	*Time.*	*Motion.*	*Time.*	*Motion.*	*Time.*
'	45	H.	46	H.	47	H.
''	2700	XVIII	2760	XVIII	2820	XIX
30	987986	12	988929	36	989854	0
31	988002		988946		989869	
32	988018		988961		989885	
33	988034	13	988977	37	989900	1
34	988049		988992		989915	
35	988065	14	989008	38	989930	2
36	988081		989023		989945	
37	988097		989039		989961	
38	988113	15	989054	39	989976	3
39	988129		989070		989991	
40	988145	16	989085	40	990006	4
41	988161		989101		990021	
42	988176		989116		990037	
43	988192	17	989132	41	990052	5
44	988208		989147		990067	
45	988224	18	989163	42	990082	6
46	988240		989178		990097	
47	988255		989194		990112	
48	988271	19	989209	43	990128	7
49	988287		989225		990143	
50	988303	20	989240	44	990157	8
51	988319		989256		990173	
52	988334		989271		990188	
53	988350	21	989286	45	990203	9
54	988366		989382		990218	
55	988382	22	989317	46	990233	10
56	988398		989333		990248	
57	988413		989348		990264	
58	988429	23	989364	47	990279	11
59	988445		989379		990294	
60	988461	24	989395	48	990309	12

o	*Motion.*	*Time.*	*Motion.*	*Time.*	*Motion.*	*Time.*
'	48	H.	49	H.	50	H.
''	2880	XIX	2940	XIX	3000	XX
0	990309	12	991204	36	992082	0
1	990324		991219		992096	
2	990339		991234		992111	
3	990354	13	991249	37	992125	1
4	990369		991263		992140	
5	990384	14	991278	38	992154	2
6	990399		991293		992165	
7	990414		991308		992183	
8	990429	15	991322	39	992197	3
9	990444		991337		992212	
10	990459	16	991352	40	992226	4
11	990474		991367		992240	
12	990489		991381		992255	
13	990504	17	991396	41	992270	5
14	990529		991411		992284	
15	990534	18	991425	42	992298	6
16	990549		991440		992313	
17	990564		991455		992327	
18	990579	19	991469	43	992342	7
19	990594		991484		992356	
20	990609	20	991499	44	992370	8
21	990624		991513		992385	
22	990639		991528		992399	
23	990654	21	991543	45	992413	9
24	990669		991558		992427	
25	990684	22	991572	46	992442	10
26	990699		991587		992456	
27	990714		991601		992470	
28	990729	23	991616	47	992484	11
29	990744		991631		992498	
30	990759	24	991645	48	992512	12

°	*Motion.*	*Time.*	*Motion.*	*Time.*	*Motion.*	*Time.*
′	48	H.	49	H.	50	H.
″	2880	XIX	2940	XIX	3000	XX
30	990759	24	991645	48	992512	12
31	990774		991660		992527	
32	990789		991674		992543	
33	990804	25	991689	49	992557	13
34	990819		991704		992571	
35	990833	26	991718	50	992585	14
36	990848		991733		992600	
37	990864		991747		992614	
38	990878	27	991762	51	992628	15
39	990883		991777		992643	
40	990908	28	991791	52	992657	16
41	990923		991806		992671	
42	990939		991820		992686	
43	990952	29	991835	53	992700	17
44	990967		991849		992714	
45	990982	30	991864	54	992728	18
46	990997		991879		992743	
47	991012		991893		992757	
48	991027	31	991908	55	992771	19
49	991042		991922		992785	
50	991056	32	991937	56	992800	20
51	991071		991951		992814	
52	991186		991966		992828	
53	991101	33	991980	57	992843	21
54	991116		991995		992857	
55	991130	34	992009	58	992871	22
56	991145		992024		992885	
57	991160		992038		992899	
58	991175	35	992053	59	992913	23
59	991190		992068		992928	
60	991204	36	992082	XX	992942	24

2	*Motion.*	*Time.*	*Motion.*	*Time.*	*Motion*	*Time.*
′	51	H.	52	H.	53	H.
″	3060	XX	3120	XX	3180	XXI
0	992942	24	993785	48	994612	12
1	992956		993799		994626	
2	992970		993813		994640	
3	992984	25	993827	49	994654	13
4	993998		993841		994667	
5	993013	26	993855	50	994681	14
6	993027		993868		994695	
7	993042		993882		994708	
8	993055	27	993896	51	994721	15
9	993069		993910		994735	
10	993083	28	993924	52	994749	16
11	993098		993938		994762	
12	993112		993951		994776	
13	993126	29	993966	53	994789	17
14	993140		993979		994803	
15	993154	30	993993	54	994817	18
16	993168		994007		994830	
17	993182		994021		994844	
18	993196	31	994035	55	994857	19
19	993211		994049		994871	
20	993225	32	994063	56	994885	20
21	993239		994076		994899	
22	993253		994090		994912	
23	993267	33	994104	57	994925	21
24	993281		994118		994938	
25	993295	34	994132	58	994952	22
26	993309		994146		994966	
27	993323		994160		994979	
28	993337	35	994174	59	994993	23
29	993351		994187		995007	
30	993365	36	994201	XXI	995020	24

°	*Motion.*	*Time.*	*Motion.*	*Time.*	*Motion.*	*Time.*
′	51	H.	52	H.	53	H.
″	3060	XX	3120	XXI	3180	XXI
30	993365	36	994201	0	995020	24
31	993380		994215		995034	
32	993394		994228		995047	
33	993488	37	994242	1	995061	25
34	993422		994256		995074	
35	993436	38	994270	2	995088	26
36	993450		994284		995101	
37	993464		994297		995115	
38	993478	39	994311	3	995128	27
39	993492		994325		995142	
40	993506	40	994338	4	995155	28
41	993520		994352		995169	
42	993534		994366		995183	
43	993548	41	994380	5	995196	29
44	993562		994393		995209	
45	993576	42	994407	6	995223	30
46	993590		994421		995236	
47	993604		994435		995250	
48	993618	43	994448	7	995263	31
49	993632		994462		995276	
50	993646	44	994476	8	995290	32
51	993660		994489		995303	
52	993674		994503		995317	
53	993688	45	994517	9	995330	33
54	993701		994530		995344	
55	993715	46	994544	10	995357	34
56	993729		994558		995370	
57	993743		994571		995384	
58	993757	47	994585	11	995397	35
59	993771		994599		995411	
60	993785	48	994612	12	995424	36

☊	*Motion.*	*Time.*	*Motion.*	*Time.*	*Motion.*	*Time.*
′	54	H.	55	H.	56	H.
″	3240	XXI	3300	XXII	3360	XXII
0	995424	36	996221	0	997004	24
1	995437		996234		997017	
2	995451		996247		997020	
3	995465	37	996260	1	997042	25
4	995478		996274		997055	
5	995491	38	996287	2	997068	26
6	995404		996300		997081	
7	995518		996313		997094	
8	995531	39	996326	3	997107	27
9	995545		996339		997120	
10	995558	40	996352	4	997132	28
11	995571		996366		997145	
12	995585		996380		997158	
13	995598	41	996392	5	997171	29
14	995611		996405		997184	
15	995625	42	996418	6	997197	30
16	995638		996431		997210	
17	995651		996444		997223	
18	995665	43	996457	7	997236	31
19	995678		996470		997249	
20	995691	44	996483	8	997261	32
21	995705		996496		997274	
22	995718		996510		997287	
23	995731	45	996523	9	997300	33
24	995745		996536		997313	
25	995758	46	996549	10	997325	34
26	995771		996562		997338	
27	995785		996575		997351	
28	995798	47	996588	11	997364	35
29	995811		996601		997377	
30	995824	48	996614	12	997390	36

°	*Motion.*	*Time.*	*Motion.*	*Time.*	*Motion.*	*Time.*
′	54	H	55	H.	56	H.
″	3240	XXI	3300	XXII	3360	XXII
30	995824	48	996614	12	997390	36
31	995837		996627		997402	
32	995851		996640		997415	
33	995864	49	996653	13	997428	37
34	995877		996666		997441	
35	995891	50	996679	14	997454	38
36	995903		996692		997466	
37	995917		996705		997479	
38	995930	51	996718	15	997492	39
39	995944		996731		997505	
40	995958	52	996744	16	997517	40
41	995970		996757		997530	
42	995983		996770		997543	
43	995997	53	996783	17	997556	41
44	996010		996796		997569	
45	996023	54	996809	18	997581	42
46	996036		996822		997594	
47	996050		996835		997607	
48	996063	55	996848	19	997620	43
49	996067		996861		997632	
50	996089	56	996874	20	997645	44
51	996102		996887		997658	
52	996116		996900		997671	
53	996129	57	996913	21	997683	45
54	996142		996926		997696	
55	996155	58	996939	22	997709	46
56	996168		996952		997721	
57	996181		996965		997734	
58	996195	59	996978	23	997747	47
59	996208		996991		997760	
60	996221	XXII	997004	24	997772	48

°	*Motion.*	*Time.*	*Motion.*	*Time.*	*Motion.*	*Time.*
′	57	H.	58	H.	59	H.
″	3420	XXII	3480	XXIII	3540	XXIII
0	997772	48	998528	12	999270	36
1	997785		998540		999282	
2	997798		998553		999294	
3	997810	49	998565	13	999306	37
4	997823		998577		999319	
5	997836	50	998590	14	999331	38
6	997848		998602		999343	
7	997861		998615		999356	
8	997874	51	998627	15	999368	39
9	997886		998640		999380	
10	997899	52	998653	16	999392	40
11	997912		998665		999405	
12	997925		998677		999417	
13	997937	53	998689	17	999429	41
14	997950		998702		999441	
15	997963	54	998714	18	999453	42
16	997975		998727		999466	
17	997987		998739		999478	
18	998000	55	998752	19	999490	43
19	998013		998764		999502	
20	998025	56	998776	20	999515	44
21	998038		998789		999527	
22	998051		998801		999539	
23	998063	57	998813	21	999551	45
24	998076		998826		999563	
25	998089	58	998838	22	999575	46
26	998101		998851		999588	
27	998114		998863		999600	
28	998126	59	998816	23	999612	47
29	998139		998888		999624	
30	998152	XXIII	998900	24	999636	48

°	Motion.	Time.	Motion.	Time.	Motion.	Time.
′	57	H.	58	H.	59	H.
″	3460	XXIII	3480	XXIII	3540	XXIII
30	998152	0	998900	24	999636	48
31	998165		998913		999649	
32	998177		998925		999661	
33	998189	1	998937	25	999673	49
34	998202		998949		999685	
35	998214	2	998962	26	999697	50
36	998227		998974		999709	
37	998240		998987		999721	
38	998252	3	998999	27	999734	51
39	998265		999012		999746	
40	998278	4	999024	28	999758	52
41	998290		999036		999770	
42	998302		999049		999782	
43	998315	5	999061	29	999794	53
44	998327		999073		999806	
45	998340	6	999086	30	999818	54
46	998352		999098		999831	
47	998365		999110		999843	
48	998378	7	999122	31	999855	55
49	998390		999135		999867	
50	998403	8	999147	32	999879	56
51	998415		999159		999891	
52	998428		999172		999903	
53	998440	9	999184	33	999915	57
54	998453		999196		999927	
55	998465	10	999209	34	999939	58
56	998478		999221		999951	
57	998490		999232		999963	
58	998503	11	999245	35	999976	59
59	998515		999258		999988	
60	998528	12	999270	36	1000000	XXIV

″	*Log* 1°	*Log* 1° 1′	*Log* 1° 2′
0	1000000	1000718	1001424
1	1000012	1000730	1001435
2	1000024	1000742	1001447
3	1000036	1000754	1001459
4	1000048	1000765	1001471
5	1000060	1000777	1001483
6	1000072	1000789	1001495
7	1000084	1000801	1001506
8	1000096	1000813	1001517
9	1000108	1000825	1001529
10	1000120	1000837	1001540
11	1000132	1000848	1001552
12	1000144	1000860	1001564
13	1000156	1000872	1001575
14	1000168	1000884	1001587
15	1000180	1000896	1001599
16	1000192	1000907	1001601
17	1000204	1000919	1001622
18	1000216	1000931	1001634
19	1000228	1000943	1001646
20	1000240	1000954	1001658
21	1000252	1000966	1001668
22	1000264	1000978	1001680
23	1000276	1000990	1001692
24	1000288	1001001	1001703
25	1000300	1001013	1001715
26	1000312	1001025	1001726
27	1000324	1001037	1001738
28	1000336	1001049	1001750
29	1000348	1001060	1001761
30	1000360	1001072	1001773

′	*Log.* 1°	*Log.* 1° 1′	*Log.* 1° 2′
30	1000360	1001072	1001773
31	1000372	1001084	1001784
32	1000384	1001096	1001796
33	1000396	1001108	1001807
34	1000408	1001120	1001819
35	1000420	1001131	1001831
36	1000432	1001143	1001843
37	1000444	1001155	1001855
38	1000456	1001166	1001865
39	1000468	1001178	1001877
40	1000480	1001190	1001888
41	1000492	1001202	1001900
42	1000504	1001214	1001912
43	1000516	1001226	1001923
44	1000528	1001237	1001934
45	1000540	1001248	1001945
46	1000552	1001260	1001656
47	1000563	1001272	1001969
48	1000575	1001284	1001981
49	1000587	1001296	1001993
50	1000599	1001307	1002004
51	1000611	1001319	1002016
52	1000623	1001330	1002028
53	1000635	1001342	1002038
54	1000647	1001354	1002050
55	1000659	1001366	1002061
56	1000670	1001377	1002073
57	1000682	1001389	1002084
58	1000694	1001390	1002096
59	1000706	1001402	1002107
60	1000716	1001424	1002119

°	0	1	2	3
′ ″	0	60	120	180
0	00000	17782	14771	13010
1	35563	17710	14735	12986
2	32553	17639	14699	12962
3	30792	17570	14664	12936
4	29542	17501	14629	12915
5	28573	17434	14594	12891
6	27782	17368	14559	12868
7	27112	17302	14525	12845
8	26532	17238	14491	12821
9	26021	17175	14457	12798
10	25163	17112	14424	12775
11	25149	17050	14390	12753
12	24771	16990	14357	12730
13	24424	16930	14325	12707
14	24102	16871	14292	12685
15	23802	16812	14260	12663
16	23522	16755	14228	12640
17	23259	16698	14196	12618
18	23010	16642	14165	12596
19	22775	16587	14133	12574
20	22553	16532	14102	12553
21	22341	16478	14071	12531
22	22139	16425	14040	12510
23	21946	16372	14010	12488
24	21761	16320	13979	12467
25	21584	16269	13949	12445
26	21413	16218	13919	12424
27	21249	16168	13890	12403
28	21091	16118	13860	12382
29	20939	16069	13831	12362
30	20792	16021	13802	12341

°	0	1	2	3
″	0	60	120	180
30	20792	16021	13802	12341
31	20649	15973	13773	12320
32	20512	15625	13745	12300
33	20378	15878	13716	12279
34	20248	15832	13688	12259
35	20122	15786	13660	12239
36	20000	15740	13632	12218
37	19881	15695	13604	12198
38	19765	15651	13576	12178
39	19652	15607	13549	12159
40	19542	15563	13522	12139
41	19435	15520	13495	12119
42	19331	15477	13468	12099
43	19228	15435	13441	12080
44	19128	15393	13415	12061
45	19031	15351	13388	12041
46	18935	15310	13362	12022
47	18842	15269	13336	12003
48	18751	15229	13310	11984
49	18661	15189	13284	11965
50	18575	15149	13259	11946
51	18487	15110	13233	11927
52	18403	15071	13208	11908
53	18320	15032	13183	11889
54	18239	14994	13158	11871
55	18159	14956	13133	11852
56	18081	14918	13108	11834
57	18004	14881	13083	11816
53	17929	14844	13059	11797
59	17855	14808	13034	11779
60	17782	14771	13010	11761

°	4	5	6	7
′ ″	240	300	360	420
0	11761	10792	10000	9331
1	11743	10777	9988	9320
2	11725	10763	9976	9310
3	11707	10749	9964	9300
4	11689	10734	9952	9289
5	11671	10720	9940	9279
6	11654	10706	9928	9269
7	11636	10692	9916	9259
8	11619	10678	9905	9249
9	11601	10663	9893	9238
10	11584	10649	9881	9228
11	11566	10635	9869	9218
12	11549	10621	9858	9208
13	11532	10608	9846	9198
14	11515	10594	9834	9188
15	11498	10580	9823	9178
16	11481	10566	9811	9168
17	11464	10552	9800	9158
18	11447	10539	9784	9148
19	11430	10525	9777	9138
20	11414	10512	9761	9128
21	11397	10498	9754	9119
22	11380	10484	9742	9109
23	11363	10471	9731	9099
24	11347	10458	9720	9089
25	11331	10444	9708	9079
26	11314	10431	9697	9070
27	11298	10418	9986	9060
28	11282	10404	9975	9050
29	11266	10391	9964	9041
30	11249	10378	9952	9031

°	4	5	6	7
'				
''	240	300	360	420
30	11249	10378	9652	9031
31	11233	10365	9641	9021
32	11217	10352	9630	9012
33	11201	10339	9619	9002
34	11186	10326	9608	8992
35	11170	10313	9597	8983
36	11154	10300	9586	8973
37	11138	10287	9575	8964
38	11123	10274	9564	8954
39	11107	10261	9553	8945
40	11091	10246	9542	8935
41	11076	10235	9532	8926
42	11061	10223	9521	8917
43	11045	10210	9510	8907
44	11030	10197	9499	8898
45	11015	10185	9488	8888
46	10999	10172	9478	8879
47	10984	10160	9467	8870
48	10969	10147	9456	8861
49	10954	10135	9446	8851
50	10939	10122	9435	8842
51	10924	10110	9425	8833
52	10909	10098	9414	8824
53	10894	10085	9404	8814
54	10880	10073	9393	8805
55	10865	10061	9383	8796
56	10850	10049	9372	8787
57	10835	10036	9362	8778
58	10821	10024	9351	8769
59	10806	10012	9341	8760
60	10792	10000	9331	8751

°	8	9	10	11	12
′					
″	480	540	600	660	720
0	8751	8239	7782	7368	6990
1	8742	8231	7774	7361	6984
2	8733	8223	7767	7354	6978
3	8724	8215	7760	7348	6972
4	8715	8207	7753	7341	6966
5	8706	8199	7745	7335	6960
6	8697	8191	7738	7328	6954
7	8688	8183	7731	7322	6948
8	8679	8175	7724	7315	6942
9	8670	8167	7717	7309	6936
10	8661	8159	7710	7302	6930
11	8652	8152	7703	7296	6924
12	8643	8144	7696	7289	6918
13	8635	8136	7688	7283	6912
14	8626	8128	7681	7276	6906
15	8617	8120	7674	7270	6900
16	8608	8112	7667	7264	6894
17	8599	8104	7660	7257	6888
18	8591	8097	7653	7251	6882
19	8582	8089	7646	7244	6877
20	8573	8081	7639	7238	6871
21	8565	8073	7632	7232	6865
22	8556	8066	7625	7225	6859
23	8547	8058	7618	7219	6853
24	8539	8050	7611	7212	6847
25	8530	8043	7604	7206	6841
26	8522	8035	7597	7200	6836
27	8513	8027	7590	7193	6830
28	8504	8020	7583	7187	6824
29	8495	8012	7577	7181	6818
30	8487	8004	7570	7175	6812

° ′ ″	8 480	9 540	10 600	11 660	12 720
30	8487	8004	7570	7175	6812
31	8479	7997	7563	7168	6807
32	8470	7989	7556	7162	6801
33	8462	7981	7549	7156	6795
34	8453	7974	7542	7149	6789
35	8445	7966	7535	7143	6784
36	8437	7959	7528	7147	6778
37	8428	7951	7522	7131	6772
38	8420	7944	7515	7124	6766
39	8411	7936	7508	7118	6761
40	8403	7929	7501	7112	6755
41	8395	7921	7494	7106	6749
42	8386	7914	7488	7100	6743
43	8378	7906	7481	7093	6738
44	8370	7899	7474	7087	6732
45	8361	7891	7467	7081	6726
46	8353	7884	7461	7075	6721
47	8345	7877	7454	7069	6715
48	8337	7869	7447	7063	6709
49	8328	7862	7441	7057	6704
50	8320	7855	7434	7050	6696
51	8312	7847	7427	7044	6692
52	8304	7840	7421	7038	6687
53	8296	7832	7414	7032	6681
54	8288	7825	7407	7026	6676
55	8279	7818	7401	7020	6670
56	8271	7811	7394	7014	6664
57	8263	7803	7387	7008	6659
58	8255	7796	7381	7002	6653
59	8247	7789	7374	6996	6648
60	8239	7782	7368	6990	6642

°	13	14	15	16	17
′					
″	780	840	900	960	1020
0	6642	6320	6021	5740	5477
1	6637	6315	6016	5736	5473
2	6631	6310	6011	5731	5469
3	6625	6305	6006	5727	5464
4	6620	6300	6001	5722	5460
5	6614	6294	5997	5718	5456
6	6609	6289	5992	5713	5452
7	6603	6284	5987	5709	5447
8	6598	6279	5982	5704	5443
9	6592	6274	5977	5700	5439
10	6587	6269	5973	5695	5435
11	6581	6264	5968	5691	5430
12	6576	6259	5963	5686	5426
13	6570	6254	5958	5682	5422
14	6565	6248	5954	5677	5418
15	6559	6243	5949	5673	5414
16	6554	6238	5944	5669	5409
17	6548	6233	5939	5664	5405
18	6543	6228	5935	5660	5401
19	6538	6223	5930	5655	5397
20	6532	6218	5925	5651	5393
21	6527	6213	5920	5646	5389
22	6521	6208	5916	5642	5384
23	6516	6203	5911	5637	5380
24	6510	6198	5906	5633	5376
25	6505	6193	5902	5629	5372
26	6500	6188	5897	5624	5368
27	6494	6183	5892	5620	5364
28	6489	6178	5888	5615	5359
29	6484	6173	5883	5611	5355
30	6478	6168	5878	5607	5351

°	13	14	15	16	17
′					
″	780	840	900	960	1020
30	6478	6168	5878	5607	5351
31	6473	6163	5874	5602	5347
32	6467	6158	5869	5598	5343
33	6462	6153	5864	5594	5339
34	6457	6148	5860	5589	5335
35	6451	6143	5855	5585	5331
36	6446	6138	5850	5580	5326
37	6441	6133	5846	5576	5322
38	6435	6128	5841	5572	5318
39	6430	6123	5836	5567	5314
40	6425	6118	5832	5563	5310
41	6420	6113	5827	5559	5306
42	6414	6108	5823	5554	5202
43	6409	6103	5818	5550	5298
44	6404	6099	5813	5546	5294
45	6398	6094	5809	5541	5290
46	6393	6089	5804	5537	5285
47	6388	6084	5800	5533	5281
48	6383	6079	5795	5528	5277
49	6377	6074	5790	5524	5273
50	6372	6069	5786	5520	5269
51	6367	6084	5781	5516	5265
52	6362	6059	5777	5511	5261
53	6357	6055	5772	5507	5257
54	6351	6050	5768	5503	5253
55	6346	6045	5763	5498	5249
56	6341	6040	5758	5494	5245
57	6336	6035	5754	5490	5241
58	6331	6030	5749	5486	5237
59	6325	6025	5745	5481	5233
60	6320	6021	5740	5477	5229

°	18	19	20	21	22
′					
″	1080	1140	1200	1260	1320
0	5229	4994	4771	4559	4357
1	5225	4990	4768	4556	4354
2	5221	4986	4764	4552	4351
3	5217	4983	4760	4549	4347
4	5213	4979	4757	4546	4344
5	5209	4975	4753	4542	4341
6	5205	4971	4750	4539	4338
7	5201	4967	4746	4535	4334
8	5197	4964	4742	4532	4331
9	5193	4960	4739	4528	4328
10	5189	4956	4735	4525	4325
11	5185	4952	4732	4522	4321
12	5181	4949	4728	4518	4318
13	5177	4945	4724	4515	4315
14	5173	4941	4721	4511	4311
15	5169	4937	4717	4508	4308
16	5165	4633	4714	4505	4305
17	5161	4930	4710	4501	4302
18	5157	4926	4707	4498	4298
19	5153	4922	4703	4494	4295
20	5149	4918	4699	4491	4292
21	5145	4915	4696	4488	4289
22	5141	4911	4693	4484	4285
23	5137	4907	4689	4481	4282
24	5133	4903	4685	4477	4279
25	5129	4900	4682	4474	4276
26	5125	4896	4678	4471	4273
27	5122	4892	4675	4467	4269
28	5118	4889	4671	4464	4266
29	5114	4885	4668	4460	4263
30	5110	4881	4664	4457	4260

°	18	19	20	21	22
′					
″	1080	1140	1200	1260	1320
30	5110	4881	4664	4457	4260
31	5106	4877	4660	4454	4256
32	5102	4874	4657	4450	4253
33	5098	4870	4653	4447	4250
34	5094	4866	4650	4444	4247
35	5090	4863	4646	4440	4244
36	5086	4859	4643	4437	4240
37	5082	4855	4639	4434	4237
38	5079	4852	4636	4430	4234
39	5075	4848	4632	4427	4231
40	5071	4844	4529	4424	4228
41	5067	4841	4625	4420	4224
42	5063	4837	4622	4417	4221
43	5059	4833	4618	4414	4218
44	5055	4830	4615	4410	4215
45	5051	4826	4611	4407	4212
46	5048	4822	4608	4404	4209
47	5044	4819	4604	4400	4205
48	5040	4815	4601	4397	4202
49	5036	4811	4597	4394	4199
50	5032	4808	4594	4390	4196
51	5028	4804	4590	4387	4193
52	5025	4800	4587	4384	4189
53	5021	4797	4584	4380	4186
54	5017	4793	4580	4477	4183
55	5013	4789	4577	4374	4180
56	5009	4786	4573	4370	4177
57	5005	4782	4570	4367	4174
58	5002	4778	4566	4364	4171
59	4998	4775	4563	4360	4167
60	4994	4771	4559	4357	4164

a	23	24	25	26	27
′					
″	1380	1440	1500	1560	1620
0	4164	3979	3802	3632	3468
1	4161	3976	3799	3629	3465
2	4158	3973	3796	3626	3463
3	4155	3970	3793	3623	3460
4	4152	3967	3791	3621	3457
5	4149	3964	3788	3618	3454
6	4145	3961	3785	3615	3452
7	4142	3958	3782	3612	3449
8	4139	3955	3779	3610	3446
9	4136	3952	3776	3607	3444
10	4133	3949	3773	3604	3441
11	4130	3946	3770	3601	3438
12	4127	3943	3768	3598	3436
13	4124	3940	3765	3596	3433
14	4120	3937	3762	3593	3431
15	4117	3934	3759	3590	3428
16	4114	3931	3756	3587	3425
17	4111	3928	3753	3585	3423
18	4108	3925	3750	3582	3420
19	4105	3922	3747	3579	3417
20	4102	3919	3745	3576	3415
21	4099	3917	3742	3574	3412
22	4096	3914	3739	3571	3409
23	4092	3911	3736	3568	3407
24	4089	3908	3733	3565	3404
25	4086	3905	3730	3563	3401
26	4083	3902	3727	3560	3399
27	4080	3899	3725	3557	3396
28	4077	3896	3722	3555	3393
29	4074	3893	3719	3552	3391
30	4071	3890	3716	3549	3388

°	23	24	25	26	27
′					
″	1380	1440	1500	1560	1620
30	4071	3890	3716	3549	3389
31	4068	3887	3713	3546	3386
32	4065	3884	3710	3544	3383
33	4062	3881	3708	3541	3380
34	4059	3878	3705	3538	3378
35	4055	3875	3702	3535	3375
36	4052	3872	3699	3533	3372
37	4049	3869	3696	3530	3370
38	4046	3866	3693	3527	3367
39	4043	3863	3691	3525	3865
40	4040	3860	3688	3522	3362
41	4037	3857	3685	3519	3359
42	4034	3855	3682	3516	3357
43	4031	3852	3679	3514	3353
44	4028	3849	3677	3511	3351
45	4025	3846	3674	3508	3349
46	4022	3843	3671	3506	3346
47	4019	3840	3668	3503	3344
48	4016	3837	3665	3500	3341
49	4013	3834	3663	3497	3338
50	4010	3831	3660	3495	3336
51	4007	3828	3657	3492	3333
52	4004	3825	3654	3489	3331
53	4001	3822	3651	3487	3328
54	3998	3820	3649	3484	3325
55	3995	3817	3646	3481	3323
56	3991	3814	3643	3479	3320
57	3988	3811	3640	3476	3318
58	3985	3808	3637	3473	3315
59	3982	3805	3635	3471	3313
60	3979	3802	3632	3468	3310

°	28	29	30	31	32
′					
″	1680	1740	1800	1860	1920
0	3310	3158	3010	2868	2740
1	3307	3155	3008	2866	2728
2	3305	3153	3005	2863	2725
3	3302	3150	3003	2861	2723
4	3300	3148	3001	2859	2721
5	3297	3145	2998	2856	2719
6	3294	3143	2996	2854	2716
7	3292	3140	2993	2852	2714
8	3289	3138	2991	2849	2712
9	3287	3135	2989	2847	2710
10	3284	3133	2986	2845	2707
11	3282	3130	2984	2842	2705
12	3279	3128	2981	2840	2703
13	3276	3125	2979	2838	2701
14	3274	3123	2977	2835	2798
15	3271	3120	2974	2833	2696
16	3269	3118	2972	2831	2694
17	3266	3115	2969	2828	2692
18	3264	3113	2967	2826	2689
19	3261	3110	2965	2824	2687
20	3259	3108	2962	2821	2685
21	3256	3105	2960	2819	2683
22	3253	3103	2958	2817	2681
23	3251	3101	2955	2815	2678
24	3248	3098	2953	2812	2676
25	3246	3096	2950	2810	2674
26	3243	3093	2948	2808	2672
27	3241	3091	2946	2805	2669
28	3238	3088	2943	2803	2667
29	3236	3086	2941	2801	2665
30	3233	3083	2939	2798	2663

2	28	29	30	31	32
′					
″	1680	1740	1800	1860	1920
30	3233	3083	2939	2798	2663
31	3231	3081	2936	2796	2660
32	3228	3078	2934	2794	2658
33	3225	3076	2931	2792	2656
34	3223	3073	2929	2789	2654
35	3220	3071	2927	2787	2652
36	3218	3069	2924	2785	2649
37	3215	3066	2922	2782	2647
38	3213	3064	2920	2780	2645
39	3210	3061	2917	2778	2643
40	3208	3059	2915	2775	2640
41	3205	3056	2912	2773	2638
42	3203	3054	2910	2771	2636
43	3200	3052	2908	2769	2634
44	3198	3049	2905	2766	2632
45	3195	3047	2903	2764	2629
46	3193	3044	2901	2762	2627
47	3190	3042	2898	2760	2625
48	3188	3039	2896	2757	2623
49	3185	3037	2894	2755	2621
50	3183	3034	2891	2753	2618
51	3180	3032	2889	2750	2616
52	3178	3030	2887	2748	2614
53	3175	3027	2884	2746	2612
54	3173	3025	2882	2744	2610
55	3170	3022	2880	2741	2607
56	3168	3020	2877	2739	2605
57	3165	3018	2875	2737	2603
58	3163	3015	2873	2735	2601
59	3160	3013	2870	2732	2599
60	3159	3010	2868	2730	2596

′	33	34	35	36	37
″	1980	2040	2100	2160	2220
0	2596	2467	2341	2218	2099
1	2594	2465	2339	2216	2098
2	2592	2462	2337	2214	2096
3	2590	2460	2335	2212	2094
4	2588	2458	2333	2210	2092
5	2585	2456	2331	2208	2090
6	2583	2454	2328	2206	2088
7	2581	2452	2326	2204	2086
8	2579	2450	2324	2202	2084
9	2577	2448	2322	2200	2082
10	2574	2445	2320	2198	2080
11	2572	2443	2318	2196	2078
12	2570	2441	2316	2194	2076
13	2568	2439	2314	2192	2074
14	2566	2437	2312	2190	2072
15	2564	2435	2310	2188	2070
16	2561	2433	2308	2186	2068
17	2559	2431	2306	2184	2066
18	2557	2429	2304	2182	2064
19	2555	2426	2302	2180	2062
20	2553	2424	2300	2178	2060
21	2551	2422	2298	2176	2059
22	2548	2420	2296	2174	2057
23	2546	2418	2294	2172	2055
24	2544	2416	2291	2170	2053
25	2542	2414	2289	2169	2051
26	2540	2412	2287	2167	2049
27	2538	2410	2285	2165	2047
28	2535	2408	2283	2163	2045
29	2533	2405	2281	2161	2043
30	2531	2403	2279	2159	2041

°	33	34	35	36	37
′					
″	1980	2040	2100	2160	2220
30	2531	2403	2279	2159	2041
31	2529	2401	2277	2157	2039
32	2527	2399	2275	2155	2037
33	2525	2397	2273	2153	2035
34	2522	2395	2270	2151	2033
35	2520	2393	2269	2149	2032
36	2518	2391	2267	2147	2030
37	2516	2389	2265	2145	2029
38	2514	2387	2263	2143	2026
39	2512	2384	2261	2141	2024
40	2510	2382	2259	2139	2022
41	2507	2380	2257	2137	2020
42	2505	2378	2255	2135	2018
43	2503	2376	2253	2133	2016
44	2501	2374	2251	2131	2014
45	2499	2372	2249	2129	2012
46	2497	2370	2247	2127	2010
47	2494	2368	2245	2125	2009
48	2492	2366	2243	2123	2007
49	2490	2364	2241	2121	2005
50	2488	2361	2239	2119	2003
51	2486	2359	2237	2117	2001
52	2484	2357	2235	2115	1999
53	2482	2355	2233	2113	1997
54	2480	2353	2231	2111	1995
55	2477	2351	2229	2109	1993
56	2475	2349	2227	2107	1991
57	2473	2347	2225	2105	1989
58	2471	2345	2223	2103	1987
59	2469	2343	2220	2101	1986
60	2467	2341	2218	2099	1984

°	38	39	40	41	42
′					
″	2280	2340	2400	2460	2520
0	1984	1871	1761	1654	1549
1	1982	1869	1759	1652	1547
2	1980	1867	1757	1650	1546
3	1978	1865	1755	1648	1544
4	1976	1863	1754	1647	1542
5	1974	1862	1752	1645	1540
6	1672	1860	1750	1643	1539
7	1970	1858	1748	1641	1537
8	1968	1856	1746	1640	1535
9	1967	1854	1745	1638	1534
10	1965	1852	1743	1636	1532
11	1963	1850	1741	1634	1530
12	1961	1849	1739	1633	1528
13	1959	1847	1737	1631	1527
14	1957	1845	1736	1629	1525
15	1955	1843	1734	1627	1523
16	1953	1841	1732	1626	1522
17	1951	1839	1730	1624	1520
18	1950	1838	1728	1622	1518
19	1948	1836	1727	1620	1516
20	1946	1834	1725	1619	1515
21	1944	1832	1723	1617	1513
22	1942	1830	1721	1615	1511
23	1940	1828	1719	1613	1510
24	1938	1827	1718	1612	1508
25	1936	1825	1716	1610	1506
26	1934	1823	1714	1608	1504
27	1933	1821	1712	1606	1503
28	1931	1819	1711	1605	1501
29	1929	1817	1709	1603	1499
30	1927	1816	1707	1601	1498

°	38	39	40	41	42
′					
″	2280	2340	2400	2460	2520
30	1927	1816	1707	1601	1498
31	1925	1814	1705	1599	1496
32	1923	1812	1703	1598	1494
33	1921	1810	1702	1596	1493
34	1919	1808	1700	1594	1491
35	1918	1866	1698	1592	1489
36	1916	1805	1696	1591	1487
37	1914	1803	1694	1589	1486
38	1912	1801	1692	1587	1484
39	1910	1799	1691	1585	1482
40	1908	1797	1689	1584	1481
41	1906	1795	1687	1582	1479
42	1904	1794	1686	1580	1477
43	1903	1792	1684	1578	1476
44	1901	1790	1682	1577	1474
45	1899	1788	1680	1575	1472
46	1897	1786	1678	1573	1470
47	1895	1785	1677	1571	1469
48	1893	1783	1675	1570	1467
49	1891	1781	1673	1568	1465
50	1889	1779	1671	1566	1464
51	1888	1777	1670	1565	1462
52	1886	1775	1668	1563	1460
53	1884	1774	1666	1561	1459
54	1882	1772	1664	1559	1457
55	1880	1770	1662	1558	1455
56	1878	1768	1661	1556	1454
57	1876	1766	1659	1554	1452
58	1875	1765	1657	1552	1450
59	1873	1763	1655	1551	1449
60	1871	1761	1654	1549	1447

°	43	44	45	46	47
′					
″	2580	2640	2700	2760	2820
0	1447	1347	1249	1154	1061
1	1445	1345	1248	1152	1059
2	1443	1344	1246	1151	1057
3	1442	1342	1245	1149	1056
4	1440	1340	1243	1148	1054
5	1438	1339	1241	1146	1053
6	1437	1337	1240	1145	1051
7	1435	1335	1238	1143	1050
8	1433	1334	1237	1141	1048
9	1432	1332	1235	1140	1047
10	1430	1331	1233	1138	1045
11	1428	1329	1232	1137	1044
12	1427	1327	1230	1135	1042
13	1425	1326	1229	1134	1041
14	1423	1324	1227	1132	1039
15	1422	1322	1225	1130	1037
16	1420	1321	1224	1129	1036
17	1418	1319	1222	1127	1034
18	1417	1317	1221	1126	1033
19	1415	1316	1219	1124	1031
20	1413	1314	1217	1123	1030
21	1412	1313	1216	1121	1028
22	1410	1311	1214	1119	1027
23	1408	1309	1213	1118	1025
24	1407	1308	1211	1116	1024
25	1405	1306	1209	1115	1022
26	1403	1304	1208	1113	1021
27	1402	1303	1206	1112	1019
28	1400	1301	1205	1110	1018
29	1398	1300	1203	1109	1016
30	1397	1298	1201	1107	1015

°	43	44	45	46	47
′					
″	2580	2640	2760	2760	2820
30	1397	1298	1201	1107	1015
31	1395	1296	1200	1105	1013
32	1393	1295	1198	1104	1012
33	1392	1294	1197	1102	1010
34	1390	1291	1195	1101	1008
35	1388	1290	1194	1099	1007
36	1387	1288	1192	1098	1005
37	1385	1287	1190	1096	1004
38	1383	1285	1189	1095	1002
39	1382	1283	1187	1093	1001
40	1380	1282	1186	1091	999
41	1378	1280	1184	1090	998
42	1377	1278	1182	1088	996
43	1375	1277	1181	1087	995
44	1373	1275	1179	1085	993
45	1372	1274	1178	1084	992
46	1370	1272	1176	1082	990
47	1368	1270	1174	1081	989
48	1367	1269	1173	1079	987
49	1365	1268	1171	1078	986
50	1363	1266	1170	1076	984
51	1362	1264	1168	1074	983
52	1360	1262	1167	1073	981
53	1359	1261	1165	1071	980
54	1357	1259	1163	1070	978
55	1355	1257	1162	1068	977
56	1354	1256	1160	1067	975
57	1352	1254	1159	1065	974
58	1350	1253	1157	1064	972
59	1349	1251	1156	1062	971
60	1347	1249	1154	1061	969

°	48	49	50	51	52
′					
″	2880	2940	3000	3060	3120
0	969	880	792	706	621
1	968	878	790	704	620
2	966	877	789	703	619
3	965	875	787	702	617
4	963	874	786	700	616
5	962	872	785	699	615
6	960	871	783	697	613
7	959	869	782	696	612
8	957	868	780	694	610
9	956	866	779	693	609
10	954	865	777	692	608
11	953	863	776	690	606
12	951	862	774	689	605
13	950	860	773	687	603
14	948	859	772	686	602
15	947	857	770	685	601
16	945	856	769	683	599
17	944	855	767	682	598
18	942	854	566	680	596
19	941	853	764	679	595
20	939	850	763	678	594
21	938	849	762	676	592
22	936	847	760	675	591
23	935	846	759	673	590
24	933	844	757	672	588
25	932	843	756	670	587
26	930	841	754	669	585
27	929	840	753	668	584
28	927	838	751	666	583
29	926	837	750	665	581
30	924	835	749	663	580

°	48	49	50	51	52
'					
''	2880	2948	3000	3060	3120
30	924	835	749	663	580
31	923	834	747	662	579
32	921	833	746	661	577
33	920	831	744	659	576
34	918	830	743	658	574
35	917	828	741	656	573
36	915	827	740	655	572
37	914	825	739	654	570
38	912	824	737	652	569
39	911	822	736	651	568
40	909	821	734	649	566
41	908	819	733	648	565
42	906	818	732	647	563
43	605	816	730	645	562
44	903	815	729	644	561
45	902	814	727	642	559
46	900	812	726	641	558
47	899	811	724	640	557
48	897	809	723	638	555
49	896	808	721	637	554
50	894	806	720	635	552
51	893	805	719	634	551
52	891	803	717	633	550
53	890	802	716	631	548
54	888	801	714	630	547
55	887	799	713	628	546
56	885	798	711	627	544
57	884	796	710	626	543
58	883	795	709	624	541
59	882	793	707	623	540
60	880	792	706	621	539

°	53	54	55	56	57
' ''	3180	3240	3300	3360	3420
0	539	458	378	300	223
1	537	456	377	298	221
2	536	455	375	297	220
3	535	454	374	296	219
4	533	452	373	294	218
5	532	451	371	293	216
6	531	450	370	292	215
7	529	448	369	291	214
8	528	447	367	289	213
9	526	446	366	288	211
10	525	444	365	287	210
11	524	443	363	285	209
12	522	442	362	284	208
13	521	440	361	283	206
14	520	439	359	282	205
15	518	438	358	280	204
16	517	436	357	279	202
17	516	435	356	278	201
18	514	434	354	276	200
19	513	432	353	275	199
20	512	431	352	274	197
21	510	430	350	273	196
22	509	428	349	271	195
23	507	426	348	270	194
24	506	424	346	269	192
25	505	423	345	267	191
26	503	422	344	266	190
27	502	421	342	265	189
28	501	420	341	264	187
29	499	419	340	262	186
30	498	418	339	261	185

°	53	54	55	56	57
′					
″	3180	3240	3300	3360	3420
30	498	418	339	261	185
31	496	416	337	260	184
32	495	415	336	258	182
33	494	414	335	257	181
34	493	412	333	256	180
35	491	411	332	255	179
36	490	410	331	253	177
37	489	408	329	252	176
38	487	407	328	251	175
39	486	406	327	250	174
40	484	404	326	248	172
41	483	403	324	247	171
42	482	402	323	246	170
43	480	400	322	244	169
44	479	399	320	243	167
45	478	398	319	242	166
46	476	396	318	241	165
47	475	395	316	239	163
48	474	394	315	238	162
49	472	392	314	237	161
50	471	391	313	235	160
51	470	390	311	234	158
52	468	388	310	233	157
53	467	387	309	232	156
54	466	386	307	230	155
55	464	384	306	229	153
56	463	383	305	228	152
57	462	382	304	227	151
58	460	381	302	225	150
59	459	379	301	224	148
60	458	378	300	223	147

°	58	59	°	58	59
′			′		
″	3480	3540	″	3480	3540
0	147	73	30	110	36
1	146	72	31	109	35
2	145	71	32	107	34
3	143	69	33	106	33
4	142	68	34	105	31
5	141	67	35	104	30
6	140	66	36	103	29
7	139	64	37	101	28
8	137	63	38	100	27
9	136	62	39	99	25
10	135	61	40	98	24
11	134	60	41	96	23
12	132	58	42	95	22
13	131	57	43	94	21
14	130	56	44	93	19
15	129	55	45	91	18
16	127	53	46	90	17
17	126	52	47	89	16
18	125	51	48	88	15
19	124	50	49	87	13
20	122	49	50	85	12
21	121	47	51	84	11
22	120	46	52	83	10
23	119	45	53	82	8
24	117	44	54	80	7
25	116	42	55	79	6
26	115	41	56	78	5
27	114	40	57	77	4
28	112	39	58	75	2
29	111	38	59	74	1
30	110	36	60	73	0

° ′ ″	60	61	62	63	64
0	0	71	142	212	280
1	1	72	143	213	281
2	2	74	144	214	282
3	4	75	145	215	283
4	5	76	147	216	285
5	6	77	148	217	286
6	7	79	149	218	287
7	8	80	150	219	288
8	9	81	151	221	289
9	11	82	152	222	290
10	12	83	154	223	291
11	13	84	155	224	292
12	14	86	156	225	294
13	15	87	157	226	295
14	17	88	158	228	296
15	18	89	159	229	297
16	19	90	161	230	298
17	20	91	162	231	299
18	21	93	163	232	300
19	22	94	164	233	301
20	24	95	165	235	303
21	25	96	166	236	304
22	26	98	168	237	305
23	27	99	169	238	306
24	29	100	170	239	307
25	30	101	171	240	308
26	31	102	172	241	309
27	32	103	173	242	310
28	33	105	175	244	312
29	35	106	176	245	313
30	36	107	177	246	314

0 ' ''	60	61	62	63	64
30	36	107	177	246	314
31	37	108	178	247	315
32	38	109	179	248	316
33	39	110	180	249	317
34	41	112	182	250	318
35	42	113	183	251	319
36	43	114	184	253	321
37	44	115	185	254	322
38	45	116	186	255	323
39	46	117	187	256	324
40	48	119	189	257	325
41	49	120	190	258	326
42	50	121	191	260	327
43	51	122	192	261	328
44	52	123	193	262	329
45	53	124	194	263	330
46	55	126	195	264	332
47	56	127	196	265	333
48	57	128	198	266	334
49	58	129	199	267	335
50	60	130	200	269	336
51	61	131	201	270	337
52	62	133	202	271	338
53	63	134	203	272	339
54	64	135	205	273	341
55	65	136	206	274	342
56	67	137	207	275	343
57	68	138	208	276	344
58	69	140	209	278	345
59	70	141	210	279	346
60	71	142	212	280	347

° ′ ″	65	66	67	68	69
0	347	414	479	543	607
1	348	415	480	544	608
2	350	416	481	545	609
3	351	417	482	546	610
4	352	418	483	548	611
5	353	419	484	549	612
6	354	420	485	550	613
7	355	421	486	551	614
8	356	422	488	553	615
9	357	423	489	554	616
10	358	425	490	555	617
11	359	426	491	556	618
12	361	427	492	557	619
13	362	429	493	558	620
14	363	430	494	559	621
15	364	431	495	560	622
16	365	432	496	561	623
17	366	433	497	562	624
18	367	434	498	563	626
19	368	435	499	565	627
20	370	436	500	566	628
21	371	437	501	567	629
22	372	438	502	568	630
23	373	439	503	569	631
24	374	440	504	570	632
25	375	441	505	571	633
26	376	442	506	572	634
27	377	443	507	573	635
28	378	444	509	574	636
29	379	445	510	575	637
30	380	446	511	576	638

″	65	66	67	68	69
30	381	446	511	575	638
31	382	447	512	576	639
32	383	449	513	577	640
33	384	450	514	578	641
34	385	451	515	579	642
35	386	452	516	580	643
36	387	453	517	581	644
37	388	454	518	582	645
38	389	455	519	584	646
39	390	456	520	585	647
40	392	457	521	586	648
41	393	458	522	587	649
42	394	459	523	588	651
43	395	460	524	589	652
44	396	462	525	590	653
45	397	463	526	591	654
46	398	464	527	592	655
47	399	465	528	593	657
48	400	466	529	594	658
49	401	467	530	595	659
50	403	468	531	596	660
51	404	469	533	597	661
52	405	470	534	598	662
53	406	471	535	599	663
54	407	472	536	600	664
55	408	473	537	601	665
56	409	475	538	602	666
57	410	476	539	603	667
58	411	477	541	605	668
59	412	478	542	606	669
60	414	479	543	607	670

0 ′ ″	70	71	72	73	74
0	670	733	793	852	911
1	671	734	794	853	911
2	673	735	795	854	912
3	674	736	796	855	913
4	675	737	797	856	914
5	676	738	798	857	915
6	677	739	799	858	916
7	678	740	800	859	917
8	679	741	801	860	918
9	680	742	802	861	919
10	682	743	803	862	920
11	683	744	804	863	921
12	684	745	805	864	922
13	685	746	806	865	923
14	686	747	807	865	924
15	687	748	808	866	925
16	688	749	809	867	926
17	690	750	810	868	927
18	691	751	811	869	928
19	692	752	812	870	929
20	693	753	813	871	930
21	694	754	814	872	931
22	695	755	815	873	932
23	696	756	816	874	933
24	697	757	817	875	934
25	698	758	818	876	935
26	699	759	819	877	936
27	700	760	820	878	937
28	701	761	821	879	938
29	702	762	822	880	939
30	703	763	823	881	940

° ′ ″	70	71	72	73	74
30	703	763	823	881	940
31	704	764	824	882	941
32	705	765	825	883	942
33	706	766	826	884	943
34	707	767	827	885	944
35	708	768	828	886	945
36	709	769	829	887	946
37	710	770	830	888	947
38	711	771	831	889	948
39	712	772	832	890	948
40	713	773	833	891	949
41	714	774	834	892	950
42	715	775	835	893	951
43	716	776	836	894	952
44	717	777	837	895	953
45	718	778	838	896	954
46	719	779	839	897	955
47	720	780	840	898	956
48	721	781	841	899	957
49	722	782	842	900	958
50	723	783	843	901	959
51	724	784	844	902	960
52	725	785	845	903	961
53	726	786	846	904	962
54	727	787	847	905	963
55	728	788	848	906	964
56	729	789	849	907	965
57	730	790	850	908	966
58	731	791	851	909	967
59	732	792	852	910	968
60	733	793	852	911	969

° ′ ″	75	76	77	78	79
0	969	1026	1083	1139	1194
1	970	1027	1084	1140	1195
2	971	1028	1085	1141	1196
3	972	1029	1086	1142	1197
4	973	1030	1087	1143	1198
5	974	1031	1088	1144	1199
6	975	1032	1089	1145	1200
7	976	1033	1090	1146	1201
8	977	1034	1091	1147	1202
9	977	1035	1092	1147	1203
10	978	1036	1092	1148	1204
11	979	1037	1093	1149	1204
12	980	1038	1094	1150	1205
13	981	1039	1095	1151	1206
14	982	1040	1096	1152	1207
15	983	1041	1097	1153	1208
16	984	1042	1098	1154	1209
17	985	1043	1099	1155	1210
18	986	1043	1100	1156	1211
19	987	1044	1101	1157	1212
20	988	1045	1102	1158	1213
21	989	1046	1103	1159	1214
22	990	1047	1104	1160	1215
23	991	1048	1105	1161	1215
24	992	1049	1106	1161	1216
25	993	1050	1107	1162	1217
26	994	1051	1107	1163	1218
27	995	1052	1108	1164	1219
28	996	1053	1109	1165	1220
29	997	1054	1110	1166	1221
30	998	1055	1111	1167	1222

° ' ''	75	76	77	78	79
30	998	1055	1111	1167	1222
31	999	1056	1112	1168	1223
32	1000	1057	1113	1169	1224
33	1001	1058	1114	1170	1224
34	1001	1059	1115	1171	1225
35	1002	1059	1116	1171	1226
36	1003	1060	1117	1172	1227
37	1004	1061	1118	1173	1228
38	1005	1062	1119	1174	1229
39	1006	1063	1120	1175	1230
40	1007	1064	1121	1176	1231
41	1008	1065	1121	1177	1232
42	1009	1066	1122	1178	1233
43	1010	1067	1123	1179	1234
44	1011	1068	1124	1180	1235
45	1012	1069	1125	1181	1235
46	1013	1070	1126	1182	1236
47	1014	1071	1127	1182	1237
48	1015	1072	1128	1183	1238
49	1016	1073	1129	1184	1239
50	1017	1074	1130	1185	1240
51	1018	1075	1131	1186	1241
52	1019	1076	1132	1187	1242
53	1020	1076	1133	1188	1243
54	1021	1077	1134	1189	1244
55	1022	1078	1134	1190	1244
56	1023	1079	1135	1191	1245
57	1023	1080	1136	1192	1246
58	1024	1081	1137	1193	1247
59	1025	1082	1138	1193	1248
60	1026	1083	1139	1194	1249

0 ' ''	80	81	82	83	84
0	1249	1303	1356	1409	1461
1	1250	1304	1357	1410	1462
2	1251	1305	1358	1411	1463
3	1252	1306	1359	1411	1463
4	1253	1307	1360	1412	1464
5	1254	1308	1361	1413	1465
6	1255	1309	1362	1414	1466
7	1255	1310	1362	1415	1467
8	1256	1311	1363	1416	1468
9	1257	1312	1364	1417	1469
10	1258	1313	1365	1418	1470
11	1259	1314	1366	1418	1471
12	1260	1315	1367	1419	1471
13	1261	1316	1368	1420	1472
14	1262	1316	1369	1421	1473
15	1263	1317	1369	1422	1474
16	1264	1318	1370	1423	1475
17	1264	1319	1371	1424	1476
18	1265	1319	1372	1425	1476
19	1266	1320	1373	1425	1477
20	1267	1321	1374	1426	1478
21	1268	1322	1375	1427	1479
22	1269	1323	1376	1428	1480
23	1270	1324	1376	1429	1481
24	1271	1325	1377	1430	1482
25	1272	1326	1378	1431	1482
26	1273	1327	1379	1432	1483
27	1274	1327	1380	1432	1484
28	1275	1328	1381	1433	1485
29	1276	1329	1382	1434	1486
30	1277	1330	1383	1435	1487

° ″	80	81	82	83	84
30	1276	1330	1383	1435	1487
31	1277	1331	1383	1436	1487
32	1278	1332	1384	1437	1488
33	1279	1332	1385	1438	1489
34	1280	1333	1386	1439	1490
35	1281	1334	1387	1439	1491
36	1282	1335	1388	1440	1492
37	1282	1336	1389	1441	1493
38	1283	1337	1390	1442	1494
39	1284	1338	1390	1443	1494
40	1285	1339	1391	1444	1495
41	1286	1339	1392	1444	1496
42	1287	1340	1393	1445	1497
43	1288	1341	1394	1446	1498
44	1289	1342	1395	1447	1499
45	1290	1343	1396	1448	1499
46	1291	1344	1397	1449	1500
47	1291	1345	1397	1450	1501
48	1292	1346	1398	1451	1502
49	1293	1346	1399	1451	1503
50	1294	1347	1400	1452	1504
51	1295	1348	1401	1453	1505
52	1296	1349	1402	1454	1506
53	1297	1350	1403	1455	1506
54	1298	1351	1404	1456	1507
55	1298	1352	1404	1457	1508
56	1299	1353	1405	1458	1509
57	1300	1354	1406	1458	1510
58	1301	1355	1407	1459	1511
59	1302	1355	1408	1460	1511
60	1303	1356	1409	1461	1512

° ′ ″	85	86	87	88	89
0	1512	1563	1613	1663	1712
1	1513	1564	1614	1664	1713
2	1514	1565	1615	1665	1714
3	1515	1566	1616	1665	1714
4	1516	1567	1617	1666	1715
5	1516	1567	1617	1667	1716
6	1517	1568	1618	1668	1717
7	1518	1569	1619	1669	1718
8	1519	1570	1620	1670	1719
9	1520	1571	1621	1670	1719
10	1521	1572	1621	1671	1720
11	1522	1572	1622	1672	1721
12	1523	1573	1623	1673	1722
13	1523	1574	1624	1674	1723
14	1524	1575	1625	1675	1724
15	1525	1576	1626	1675	1725
16	1526	1577	1627	1676	1726
17	1527	1577	1627	1677	1727
18	1528	1578	1628	1678	1727
19	1528	1579	1629	1678	1728
20	1529	1580	1630	1679	1729
21	1530	1581	1631	1680	1730
22	1531	1582	1632	1681	1731
23	1532	1582	1632	1682	1732
24	1533	1583	1633	1683	1732
25	1533	1584	1634	1683	1733
26	1534	1585	1635	1684	1734
27	1535	1586	1636	1685	1735
28	1536	1587	1637	1686	1735
29	1537	1587	1637	1687	1736
30	1538	1588	1638	1688	1737

° ′ ″	85	86	87	88	89
30	1538	1588	1638	1688	1736
31	1539	1589	1639	1688	1737
32	1540	1590	1640	1689	1738
33	1540	1591	1641	1690	1739
34	1541	1592	1642	1691	1740
35	1542	1592	1642	1692	1740
36	1543	1593	1643	1693	1741
37	1544	1594	1644	1693	1742
38	1545	1595	1645	1694	1743
39	1545	1596	1646	1695	1743
40	1546	1597	1647	1696	1744
41	1547	1597	1647	1696	1745
42	1548	1598	1648	1697	1746
43	1549	1599	1649	1698	1747
44	1550	1600	1650	1699	1748
45	1550	1601	1650	1700	1748
46	1551	1602	1651	1701	1749
47	1552	1602	1652	1701	1750
48	1553	1603	1653	1702	1751
49	1554	1604	1654	1703	1752
50	1555	1605	1655	1704	1753
51	1555	1606	1656	1705	1753
52	1556	1607	1656	1706	1754
53	1557	1608	1657	1706	1755
54	1558	1608	1658	1707	1756
55	1559	1609	1659	1708	1756
56	1560	1610	1660	1709	1757
57	1560	1611	1660	1709	1758
58	1561	1612	1661	1710	1759
59	1562	1612	1662	1711	1760
60	1563	1613	1663	1712	1761

″	90	91	92	93	94
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2	1762	1810	1858	1905	1951
3	1763	1811	1858	1905	1952
4	1764	1812	1859	1906	1953
5	1764	1812	1860	1907	1953
6	1765	1813	1861	1908	1954
7	1766	1814	1862	1909	1955
8	1767	1815	1863	1909	1956
9	1768	1816	1864	1910	1956
10	1769	1817	1864	1911	1957
11	1769	1817	1865	1912	1958
12	1770	1818	1866	1913	1959
13	1771	1819	1867	1914	1959
14	1772	1820	1868	1914	1960
15	1772	1820	1869	1915	1961
16	1773	1821	1869	1916	1962
17	1774	1822	1870	1917	1962
18	1775	1823	1871	1918	1963
19	1776	1823	1872	1919	1964
20	1777	1824	1872	1919	1965
21	1778	1825	1873	1920	1965
22	1778	1826	1874	1920	1966
23	1779	1827	1875	1921	1967
24	1780	1828	1875	1922	1968
25	1780	1828	1876	1923	1968
26	1781	1829	1877	1923	1969
27	1782	1830	1878	1924	1970
28	1783	1831	1879	1925	1971
29	1784	1831	1879	1925	1972
30	1785	1832	1880	1926	1973

° ' ''	90	91	92	93	94
30	1785	1832	1880	1926	1973
31	1785	1833	1880	1927	1973
32	1786	1834	1881	1928	1974
33	1787	1835	1882	1928	1975
34	1788	1836	1883	1929	1976
35	1788	1836	1884	1930	1976
36	1789	1837	1885	1931	1977
37	1790	1838	1886	1931	1978
38	1791	1839	1887	1932	1979
39	1792	1840	1888	1933	1979
40	1793	1840	1889	1934	1980
41	1793	1841	1890	1935	1981
42	1794	1842	1891	1936	1982
43	1795	1842	1891	1937	1982
44	1796	1843	1892	1937	1983
45	1796	1844	1893	1938	1984
46	1797	1845	1894	1939	1985
47	1798	1846	1894	1939	1985
48	1799	1847	1895	1940	1986
49	1800	1847	1895	1941	1987
50	1801	1848	1895	1942	1988
51	1801	1849	1896	1942	1988
52	1802	1850	1897	1943	1989
53	1803	1850	1897	1944	1990
54	1804	1851	1898	1945	1991
55	1804	1852	1899	1946	1991
56	1805	1853	1900	1947	1992
57	1806	1854	1900	1947	1993
58	1807	1854	1901	1948	1994
59	1808	1855	1902	1948	1994
60	1809	1856	1903	1949	1995

° ' ''	95	96	97	98	99
0	1995	2041	2086	2130	2175
1	1996	2041	2086	2131	2175
2	1997	2042	2087	2132	2176
3	1997	2043	2088	2132	2176
4	1998	2044	2089	2133	2177
5	1999	2045	2089	2134	2178
6	2000	2046	2090	2135	2179
7	2001	2047	2091	2135	2179
8	2002	2047	2092	2136	2180
9	2002	2048	2092	2137	2181
10	2003	2049	2093	2138	2182
11	2004	2050	2094	2138	2182
12	2005	2050	2095	2139	2183
13	2006	2051	2095	2140	2184
14	2007	2052	2096	2141	2185
15	2008	2053	2097	2141	2185
16	2008	2054	2098	2142	2186
17	2009	2054	2098	2143	2187
18	2009	2055	2099	2144	2188
19	2010	2055	2100	2145	2188
20	2011	2056	2101	2145	2189
21	2011	2056	2101	2146	2190
22	2012	2057	2102	2147	2191
23	2013	2058	2103	2147	2191
24	2014	2059	2104	2148	2192
25	2014	2059	2104	2149	2193
26	2015	2060	2105	2150	2194
27	2016	2061	2106	2150	2194
28	2017	2062	2107	2151	2195
29	2017	2062	2107	2152	2195
30	2018	2063	2108	2153	2196

o ′ ″	95	96	97	98	99
30	2018	2063	2108	2153	2196
31	2019	2064	2109	2153	2197
32	2020	2065	2110	2154	2198
33	2020	2065	2110	2154	2198
34	2021	2066	2111	2155	2199
35	2022	2067	2112	2156	2200
36	2023	2068	2113	2157	2201
37	2023	2068	2113	2157	2201
38	2024	2069	2114	2158	2202
39	2025	2070	2115	2159	2203
40	2026	2071	2116	2160	2204
41	2026	2072	2116	2160	2204
42	2027	2072	2117	2161	2205
43	2028	2073	2118	2162	2205
44	2029	2074	2119	2163	2206
45	2029	2074	2119	2163	2207
46	2030	2075	2120	2164	2208
47	2031	2076	2121	2165	2208
48	2032	2077	2122	2166	2209
49	2032	2077	2122	2167	2210
50	2033	2078	2123	2167	2211
51	2034	2079	2124	2168	2211
52	2035	2080	2125	2169	2212
53	2035	2081	2125	2169	2213
54	2036	2082	2126	2170	2214
55	2037	2083	2126	2171	2214
56	2038	2083	2127	2172	2215
57	2039	2084	2128	2172	2216
58	2039	2084	2129	2173	2217
59	2040	2085	2129	2174	2217
60	2041	2086	2130	2175	2218

° ′ ″	100	101	102	103	104
0	2218	2261	2304	2347	2389
1	2219	2262	2305	2348	2390
2	2220	2263	2306	2349	2390
3	2220	2263	2306	2349	2391
4	2221	2264	2307	2350	2392
5	2222	2265	2307	2350	2392
6	2223	2266	2308	2351	2393
7	2223	2267	2309	2351	2394
8	2224	2267	2310	2352	2394
9	2224	2268	2310	2353	2395
10	2225	2269	2311	2354	2396
11	2226	2269	2312	2355	2396
12	2227	2270	2313	2355	2397
13	2228	2270	2313	2356	2398
14	2228	2271	2314	2357	2399
15	2229	2272	2315	2357	2399
16	2230	2273	2316	2358	2400
17	2230	2273	2316	2359	2401
18	2231	2274	2317	2360	2401
19	2232	2275	2317	2360	2402
20	2233	2276	2318	2361	2403
21	2233	2276	2319	2362	2403
22	2234	2277	2320	2362	2404
23	2235	2277	2320	2363	2405
24	2236	2278	2321	2364	2406
25	2236	2279	2322	2364	2406
26	2237	2280	2323	2365	2407
27	2237	2280	2323	2366	2408
28	2238	2281	2324	2366	2408
29	2239	2282	2324	2367	2409
30	2240	2283	2325	2368	2410

′ ″	100	101	102	103	104
30	2240	2283	2325	2368	2410
31	2240	2283	2326	2369	2410
32	2241	2284	2327	2369	2411
33	2242	2285	2327	2370	2412
34	2243	2286	2328	2371	2412
35	2243	2286	2329	2372	2413
36	2244	2287	2330	2373	2414
37	2245	2288	2330	2373	2415
38	2246	2289	2331	2374	2415
39	2246	2289	2332	2374	2416
40	2247	2290	2332	2375	2417
41	2247	2290	2333	2376	2417
42	2248	2291	2334	2376	2418
43	2249	2292	2334	2377	2418
44	2250	2293	2335	2377	2419
45	2250	2293	2336	2378	2420
46	2251	2294	2337	2379	2421
47	2252	2295	2337	2380	2421
48	2253	2296	2338	2380	2422
49	2253	2296	2339	2381	2423
50	2254	2297	2340	2382	2424
51	2255	2298	2340	2383	2424
52	2256	2299	2341	2383	2425
53	2256	2299	2341	2384	2426
54	2257	2300	2342	2385	2426
55	2258	2300	2343	2386	2427
56	2259	2301	2344	2386	2427
57	2259	2302	2344	2387	2428
58	2260	2303	2345	2387	2429
59	2260	2303	2346	2388	2429
60	2261	2304	2347	2389	2430

0 ′ ″	105	106	107	108	109
0	2430	2471	2512	2552	2592
1	2431	2472	2513	2553	2593
2	2432	2472	2514	2554	2594
3	2432	2473	2514	2554	2594
4	2433	2474	2515	2555	2595
5	2434	2475	2515	2556	2596
6	2435	2475	2516	2556	2596
7	2435	2476	2517	2557	2597
8	2436	2476	2517	2558	2598
9	2437	2477	2518	2558	2598
10	2437	2477	2519	2559	2599
11	2438	2478	2519	2560	2600
12	2439	2479	2520	2560	2600
13	2439	2480	2521	2561	2601
14	2440	2481	2521	2562	2602
15	2441	2481	2522	2562	2602
16	2441	2482	2523	2563	2603
17	2442	2482	2524	2564	2604
18	2443	2483	2525	2564	2604
19	2443	2484	2525	2565	2605
20	2444	2485	2526	2566	2606
21	2445	2485	2527	2566	2606
22	2446	2486	2527	2567	2607
23	2446	2487	2528	2568	2608
24	2447	2487	2529	2568	2608
25	2448	2488	2529	2569	2609
26	2448	2489	2530	2570	2610
27	2449	2489	2530	2570	2610
28	2450	2490	2531	2571	2611
29	2450	2491	2531	2572	2611
30	2451	2492	2532	2572	2612

° ′ ″	105	106	107	108	109
30	2451	2492	2532	2572	2612
31	2452	2492	2533	2573	2613
32	2452	2493	2533	2574	2613
33	2453	2494	2534	2574	2614
34	2454	2494	2535	2575	2615
35	2454	2495	2535	2576	2615
36	2455	2496	2536	2576	2616
37	2456	2496	2537	2577	2617
38	2456	2497	2537	2578	2617
39	2457	2498	2538	2578	2618
40	2458	2498	2539	2579	2619
41	2459	2499	2539	2580	2619
42	2459	2500	2540	2580	2620
43	2460	2500	2541	2581	2621
44	2461	2501	2542	2582	2621
45	2461	2502	2542	2582	2622
46	2462	2502	2543	2583	2623
47	2463	2503	2544	2584	2623
48	2463	2504	2544	2584	2624
49	2464	2504	2545	2585	2625
50	2465	2505	2546	2586	2625
51	2465	2506	2546	2586	2626
52	2466	2506	2547	2587	2627
53	2467	2507	2548	2588	2627
54	2467	2508	2548	2588	2628
55	2468	2508	2549	2589	2629
56	2469	2509	2550	2590	2629
57	2470	2510	2550	2590	2630
58	2470	2510	2551	2591	2631
59	2471	2511	2552	2592	2631
60	2471	2512	2552	2592	2632

° ′ ″	110	111	112	113	114
0	2632	2671	2710	2749	2787
1	2633	2672	2711	2749	2788
2	2633	2673	2711	2750	2788
3	2634	2673	2712	2751	2789
4	2635	2674	2713	2751	2790
5	2635	2675	2713	2752	2790
6	2636	2675	2714	2753	2791
7	2637	2676	2715	2753	2792
8	2637	2676	2715	2754	2792
9	2638	2677	2716	2755	2793
10	2639	2678	2717	2755	2793
11	2639	2678	2717	2756	2794
12	2640	2679	2718	2756	2795
13	2640	2680	2719	2757	2795
14	2641	2680	2719	2758	2796
15	2642	2681	2720	2758	2797
16	2642	2682	2721	2759	2797
17	2643	2682	2721	2760	2798
18	2644	2683	2722	2760	2798
19	2644	2684	2722	2761	2799
20	2645	2684	2723	2762	2800
21	2646	2685	2724	2762	2800
22	2646	2686	2724	2763	2801
23	2647	2686	2725	2764	2802
24	2648	2687	2726	2764	2802
25	2648	2688	2726	2765	2803
26	2649	2688	2727	2765	2804
27	2650	2689	2728	2766	2804
28	2650	2689	2728	2767	2805
29	2651	2690	2729	2767	2805
30	2652	2691	2730	2768	2806

° ′ ″	110	111	112	113	114
30	2652	2691	2730	2768	2806
31	2652	2691	2730	2769	2807
32	2653	2692	2731	2769	2808
33	2654	2693	2731	2770	2809
34	2654	2693	2732	2771	2809
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36	2656	2695	2733	2772	2810
37	2656	2695	2734	2772	2811
38	2657	2696	2735	2773	2812
39	2658	2697	2735	2774	2812
40	2658	2697	2736	2774	2813
41	2659	2698	2737	2775	2814
42	2659	2699	2737	2776	2814
43	2660	2699	2738	2776	2815
44	2661	2700	2739	2777	2816
45	2661	2700	2739	2778	2816
46	2662	2701	2740	2778	2817
47	2663	2702	2740	2779	2817
48	2663	2702	2741	2779	2818
49	2664	2703	2742	2780	2818
50	2665	2704	2742	2781	2819
51	2665	2704	2743	2781	2819
52	2666	2705	2744	2782	2820
53	2667	2706	2744	2783	2821
54	2667	2706	2745	2783	2821
55	2668	2707	2746	2784	2822
56	2669	2708	2746	2785	2822
57	2669	2708	2747	2785	2823
58	2670	2709	2748	2786	2824
59	2671	2710	2748	2787	2824
60	2671	2710	2749	2787	2825

° ′ ″	115	116	117	118	119
0	2825	2863	2900	2937	2973
1	2826	2863	2900	2937	2974
2	2826	2864	2901	2938	2975
3	2827	2864	2902	2939	2975
4	2828	2865	2902	2939	2976
5	2828	2866	2903	2940	2977
6	2829	2866	2904	2941	2977
7	2829	2867	2904	2941	2978
8	2830	2868	2905	2942	2978
9	2831	2868	2905	2942	2979
10	2831	2869	2906	2943	2980
11	2832	2869	2907	2944	2980
12	2833	2870	2907	2944	2981
13	2833	2871	2908	2945	2981
14	2834	2871	2909	2945	2982
15	2834	2872	2909	2946	2983
16	2835	2873	2910	2947	2983
17	2836	2873	2910	2947	2984
18	2836	2874	2911	2948	2984
19	2837	2874	2912	2948	2985
20	2838	2875	2912	2649	2986
21	2838	2875	2913	2950	2986
22	2839	2876	2913	2950	2987
23	2839	2876	2914	2951	2987
24	2840	2877	2915	2952	2988
25	2841	2878	2915	2952	2989
26	2841	2879	2916	2953	2989
27	2842	2879	2917	2953	2990
28	2843	2880	2917	2954	2990
29	2843	2881	2918	2955	2991
30	2844	2881	2918	2955	2992

° ′ ″	115	116	117	118	84
30	2844	2881	2918	2955	2992
31	2845	2882	2919	2956	2992
32	2846	2883	2920	2956	2993
33	2846	2884	2921	2957	2994
34	2847	2884	2921	2958	2994
35	2848	2885	2922	2958	2995
36	2848	2886	2923	2959	2995
37	2849	2887	2923	2959	2996
38	2849	2887	2924	2960	2997
39	2850	2888	2925	2961	2997
40	2851	2889	2925	2961	2998
41	2851	2889	2926	2962	2998
42	2852	2890	2926	2963	2999
43	2853	2891	2927	2963	3000
44	2853	2891	2928	2964	3000
45	2854	2892	2928	2964	3001
46	2854	2892	2929	2965	3001
47	2855	2893	2929	2966	3002
48	2856	2894	2930	2966	3003
49	2856	2894	2931	2967	3003
50	2857	2895	2931	2967	3004
51	2858	2895	2932	2968	3004
52	2858	2896	2933	2969	3005
53	2859	2896	2933	2969	3006
54	2859	2897	2934	2970	3006
55	2860	2897	2934	2970	3007
56	2861	2898	2935	2971	3007
57	2861	2898	2935	2972	3008
58	2862	2899	2936	2972	3009
59	2862	2899	2936	2973	3009
60	2863	2800	2937	2973	3010

FINIS.